

# AMERICAN *Bee* Journal



Comb  
Foundation

One Hundredth  
Anniversary  
1861-1960

VOLUME 100

APRIL 1960

NUMBER 4

# 1926 — 1960

## York's Bees

### Quality Bred

MARCH ABJ — 1926

#### Italian Bees for 1926 as Good as the Best

Combless packages, Nuclei and Queens. Priced right, save the difference. Quick transportation, thirty-four trains daily carrying express and mail.

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## MIDNITES



## ITALIANS

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| Quantity   | 1-24   | 25-99  | 100 up |
|------------|--------|--------|--------|
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| 4 lb. .... | 7.20   | 6.95   | 6.70   |
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#### Extra Queens — Starline or

|         |      |      |      |
|---------|------|------|------|
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|---------|------|------|------|

**Terms:** Small orders cash, larger orders \$1.00 deposit per package and balance two weeks prior to shipping date.

Shipments start first of April depending upon spring weather conditions.

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|------------|--------|--------|--------|
| 2 lb. .... | \$4.50 | \$4.25 | \$4.00 |
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| 4 lb. .... | 6.90   | 6.65   | 6.40   |
| 5 lb. .... | 8.10   | 7.85   | 7.60   |

#### Extra Queens

|         |      |      |      |
|---------|------|------|------|
| Italian | 1.45 | 1.35 | 1.25 |
|---------|------|------|------|

**Queenless packages — deduct \$1.00 per package; Tested Queens — add \$1.00 per package or queen.**

Queens Clipped 10c. Clip and Mark 15c each additional.

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**ORDER TODAY**

| 1960 MARCH 1960 |     |     |     |     |     |     |
|-----------------|-----|-----|-----|-----|-----|-----|
| SUN             | MON | TUE | WED | THU | FRI | SAT |
| 1               | 2   | 3   | 4   | 5   | 6   | 7   |
| 8               | 9   | 10  | 11  | 12  | 13  | 14  |
| 15              | 16  | 17  | 18  | 19  | 20  | 21  |
| 22              | 23  | 24  | 25  | 26  | 27  | 28  |
| 29              | 30  | 31  |     |     |     |     |

| 1960 APRIL 1960 |     |     |     |     |     |     |
|-----------------|-----|-----|-----|-----|-----|-----|
| SUN             | MON | TUE | WED | THU | FRI | SAT |
| 1               | 2   | 3   | 4   | 5   | 6   | 7   |
| 8               | 9   | 10  | 11  | 12  | 13  | 14  |
| 15              | 16  | 17  | 18  | 19  | 20  | 21  |
| 22              | 23  | 24  | 25  | 26  | 27  | 28  |
| 29              | 30  |     |     |     |     |     |

| 1960 MAY 1960 |     |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|-----|
| SUN           | MON | TUE | WED | THU | FRI | SAT |
| 1             | 2   | 3   | 4   | 5   | 6   | 7   |
| 8             | 9   | 10  | 11  | 12  | 13  | 14  |
| 15            | 16  | 17  | 18  | 19  | 20  | 21  |
| 22            | 23  | 24  | 25  | 26  | 27  | 28  |
| 29            | 30  | 31  |     |     |     |     |

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| 4 lb. pkg. w/q | 5.75   |
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|----------------------------|--------|---------|--------|
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|--|-----------------|--------------------|
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AMERICAN BEE JOURNAL

Hamilton, Illinois

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|-----------|--------|-----------|-----------|
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Write for prices after first week in May.

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| Packages with Dadant "Starline" Hybrid Queens: |        |        |          | Packages with Jensen's "Magnolia State" Italian Queens: |          |        |  |
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| 2 Lb. ....                                     | \$4.80 | \$4.55 | \$4.30   | \$4.50  | \$4.25   | \$4.00 |  |
| 3 Lb. ....                                     | 5.90   | 5.65   | 5.40     | 5.60  | 5.35     | 5.10   |  |
| 4 Lb. ....                                     | 7.00   | 6.75   | 6.50     | 6.70  | 6.45     | 6.20   |  |
| Starline                                       |        |        | —QUEENS— |   | Magnolia |        |  |
|  | \$1.75 | \$1.65 | \$1.55   | \$1.45  | \$1.35   | \$1.25 |  |
| Clipped and Marked Free.                       |        |        |          | Air Mail Postage Paid.                                  |          |        |  |
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|------------------|-------------------|

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Hamilton

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# APRIL

## Contents

|  |     |
|--|-----|
| From Tied Combs to Comb Foundation—H. C. Dadant .....                            | 130 |
| Wax Foundation and Reinforced Combs—Frank C. Pellett .....                       | 133 |
| What about the Combs of the Future?—G. H. Cale .....                             | 136 |
| Amos Ives Root, a Biography—Huber H. Root .....                                  | 138 |
| 100 Years Is a Long Time—Jack Deyell .....                                       | 140 |
| Flashback—Move 'Em Out—Let's Go .....  | 142 |
| 706 Foundation—A New Excluder—Edward G. Brown .....                              | 142 |
| AFB Is Still with Us—Robert M. Mead .....  | 143 |
| Are You Queen Conscious?—D. G. Holterman .....                                   | 143 |
| Flashback—The Things We Used to Do .....   | 144 |
| Preparing a Beekeeping Demonstration—John Van Horn .....                         | 144 |
| Oh Honey!—Bees!—Harvey Bevers .....  | 145 |
| Check-off Plan Participation for Queen Breeders .....                            | 146 |
| Do We Wish to Survive!—C. R. Beck .....  | 146 |
| Social Security for Farmers—J. Y. Waggy .....                                    | 147 |
| A. G. Woodman—M. G. Dadant ..  | 148 |
| A Commemorative Postage Stamp for Honey and Beekeeping—Francis H. Mattutat ..... | 149 |
| Plastic and Glass Tubes for Pollinating Bees .....                               | 149 |
| Let's Go on and Play Some More—Pat Dichnehl .....                                | 150 |
| The Federation—Joseph O. Moffett .....   | 151 |
| Meetings and Events .....  | 152 |
| Advertisers Index .....  | 164 |
| Crop and Market—M. G. Dadant .....   | 165 |

## The American Bee Journal Hamilton, Illinois

Vol. 100, No. 4 April, 1960

Editor—G. H. Cale  
Associate Editors—M. G. Dadant,  
Roy A. Grout

Published monthly at Hamilton, Illinois. Entered as second-class matter at the Post Office, Hamilton, Ill. in the United States, and Canada, \$2.50 a year; two years, \$4.50; three years, \$6.00. Foreign 50c a year extra. Subscription stopped at expiration date printed on wrapper. Available on microfilm at moderate prices by writing to University Microfilms, Ann Arbor, Michigan.

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## Canadian Bee Journal

Streetsville, Ontario, Canada

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|------------------|---------|----------|
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| 25 or more ..... | 1.20    | 1.50     |

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# FROM TIED COMBS TO COMB FOUNDATION

by H. C. DADANT

It seldom occurs today that anyone ventures into beekeeping by transferring bees from a box, gum or tree to a modern beehive. Many years ago colonies were so established. To do so is a good lesson in beekeeping. Bees readily adapt themselves to the modern beehive as it is a piece of equipment suitable for their needs and is economical as well as practical for the beekeeper who cares for them.

Bees accept a modern home as it satisfies their instincts if the furniture inside meets their needs. It must be well arranged and properly spaced bee comb. Bee comb is a great inducement for them to stay, once they are installed on it. The hive must be something besides a mere shelter. A bare beehive offers little inducement, even though their foods, pollen and honey and suitable weather, may be present in the vicinity to impel comb building.

A piece of comb is a little bait. When transferring, however, if much of the comb and brood is moved with bees, the new location becomes attractive. Bees give the greatest care to brood and are as satisfied as the proverbial contented cow. A contented hum is very apparent once you know to recognize it and is very different from the harsh buzz of angry bees.

Very cross types of bees are seldom found today among experienced beekeepers, queen and package shippers. Most of the bees offered for sale have been selected to eliminate excessive temper. With proper care a transfer job can be done with little danger of encountering the old type black or common hybrid. They are not worth the time and risk necessary to save them.

Removing a colony of bees from their location without their combs no doubt discourages them, much as a family is disturbed when driven from their house to Siberia with only the clothes on their backs. The honeycombs they occupy are their assets and the beehive only a shelter, yet a fine home if the beekeeper equips it properly and gives it the proper attention.

When much of the better part of their combs is moved with bees, this saves their stored provisions, pollen and honey, worker-sized brood and together with most of the baby bees,

pupae, larvae and eggs, the colony is complete.

The continuity of their family existence is composed of adult bees through various ages from the oldest down to the hatching ones. Then on down through the day to day maturing pupae, larvae and hatching eggs, a 21-day evolution. It is necessary to keep this evolution continuous during the early spring and throughout the flying season if the colony of bees is to prosper, and produce a storage of honey both for themselves and the beekeeper. The greater the number of worker bees, the better.

The location a swarm finds for its occupancy is no doubt chosen mostly for its roominess and the protection it affords. The most popular dimensions seem to be up and down or vertical rather than in horizontal dimensions. Combs are usually started at the top and upper corners. The wax at those points is built heavy and strong enough to carry the weight of the comb and



Henry C. Dadant

its contents below.

The arrangement of comb in the brood nest from top to bottom consists of honey first, then pollen, fol-



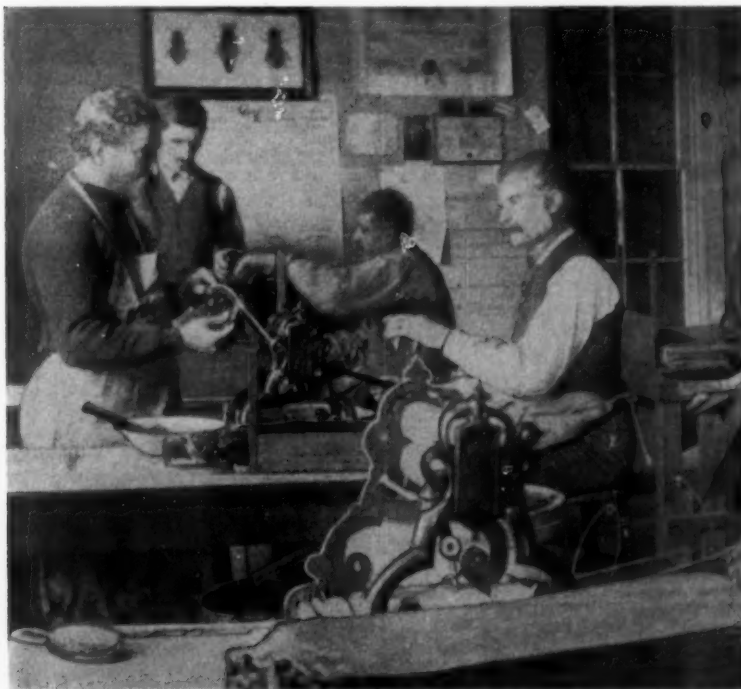
In the first foundation factory of Dadant & Sons, flat boards were soaped and dipped in and out of hot beeswax until the wax sheets on the boards were the right thickness. Then the sheets were stripped off the boards, ready to be milled.



Johannes Mehring, in Germany, first made a press to imprint wax wafers with the bottoms of cells.

lowed by comb containing brood. Thus the food is stored above the brood and close to it. In case, however, after a complete unit of brood and surrounding comb has been completed,

more room is needed, another storage and brood area is built up. Ordinarily, however, the original brood area is enlarged by crowding the food area or enlarging the present unit



The wax sheets were run through hand turned mills and piled together (lower right). Finally the sheets were trimmed with knives to the right size. (The man at the left in both pictures was C. P. Dadant).

by adding more comb to the sides and downward if space is available.

When bees have been removed or run out of their home by drumming, smoking or trapping and the comb is bare of bees, observe the position of foods, honey and pollen, and the brood. Then try to reassemble it in that order while transferring. Plan on a 2-story brood nest for the future. Plan for the large honey storage you hope to get to the position of modern supers above it all.

Do not overlook the fact that your colony of relocated bees is going modern. Discard all the drone comb possible which means practically all of it except that containing stored honey if needed. I have known the older experienced beekeepers of the days before comb foundation was available who were so keen for efficiency that they spent some time comb hunting in the spring. Calls on bee owners (not successful beekeepers) were made to purchase weak or dead colonies at little cost, just to get worker comb for their old or new colonies. Worker cells are a valuable asset. The queen lays worker eggs in them so this means a large working force to bring in the nectar later.

Although tied combs are a makeshift article today, they were a very necessary step, an intermediate gear, so to speak, to modern combs.

Many tied or transferred combs soon lose much of their usefulness because they contain undesirable areas of wavy comb that defy good bee space with adjoining ones and the drone or odd-sized cell areas are objectionable. This could not be avoided when the transferring was done, but it was imperative in those days to do the best job possible by fitting the rows of cells of various pieces of comb in line with each other, as no comb foundation was available.

Measure or lay an empty brood frame over a piece of comb cut from the original home of your bees and cut the best parts into large pieces to fit in a frame. Discard the odds and ends, odd pieces, and drone comb and save it for rendering into beeswax. When your first purchase of reinforced comb foundation arrives you will appreciate its convenience.

After the bees are all removed from the comb, lose no time. Unnail or break open as carefully as possible the receptacle in which the bees have been living. Place a modern brood frame horizontally on a board and then run an endless string

around both ends of the frame several times to be handy for the tying job as soon as the pieces of comb have been installed. Use hard string with a smooth surface. Prevent breakage of combs, keeping it in large pieces for the job. Cut them all loose with a sharp or hot knife, size up their dimensions with your eye or lay them on a frame or a frame on them and make cuts to fit it. Keep in mind that they should be, in the new frame, in a similar position top and bottom as before. In most cases rectangular pieces can be cut and fit together to the best possible advantage until the frame is full. Then spread the strands of the string, spacing them over the comb area where they will provide the best support an inch or two apart. You now have your tied comb but as bees will eventually cut the strings away, fuzzy ones especially, heavy wires cut the right length to go up and down with right angle hooks at each end should be installed too. Place them vertically here and there with the hooks driven in top bar and bottom bar of frame. Handle carefully and place the patched combs in the modern hive with the bees that you can now install into the hive. Or the bees may have been placed there previously like a swarm at the entrance or shaken in if you had some comb from another source.

Today you are a lucky beekeeper. The comb foundation is available in sheets the proper size to be placed in wired frames. You can also get it completely reinforced ready to install in brood frames.

If you get two or more tied combs in the new hive and fill the remainder with comb foundation in the modern frames, you will be gratified in seeing the bees happily reunited with their lost brood and willing to make good use of the modern equipment you have given them.

Transferring or relocating bees from a random location into modern equipment should, of course, be done in the spring on a fruit bloom day when robbing is not likely and bees are in prime condition to repair and build new comb.

Since competition for the honey market exists, the beekeeper whose hives contain the best combs will build up to the best colonies and thereby reap the top harvest, providing his location and management are suitable.

During the intervening years between the tied combs and comb

foundation, the beekeeper and his bees did fairly well if operated as efficiently as possible. It wasn't possible to build the colonies up to the greatest efficiency due to too many inferior combs. Such combs interfere with frequent and satisfactory inspection which always interferes with keeping the colonies in the most desirable conditions possible.

A standard-sized Langstroth frame 8x16 $\frac{3}{4}$  inside may contain about 5,000 or 6,000 worker cells full of brood, both sides, over the average laying area of 6 or 7x18 inches. This, of course, results in a gratifying number of worker bees hatching every day from 5 to 10 combs or more granting a sufficient supply of food is available. This was not at all possible during the struggling years up to about 1880. Although comb foundation was invented by Johannes Mehring and made on a flat press in 1857 and also devised by Gottlieb Kratchmer in the form of a comb base even earlier, about 1843, good sheets of comb foundation made on roller mills of a quality that could be wired in frames was not available in sufficient quantity until some 25 years later.

The standard Langstroth hive became better known about that time and modern or commercial honey production was launched by those discerning honey producers who believed in obtaining the strongest colonies in numbers of worker bees and the best crop possible.

The inferior combs in hand was a handicap faced by all. But something could be done to improve the equipment. For instance worker comb building could be induced with a strip of worker comb just beneath the top bars of brood frames in the spring as bees build but little or no drone comb at that time as their desire for a strong worker bee force is dominant then.

Once that desire is satisfied, the colony having become strong with an abundance of worker bees and stores of honey and pollen, they may build an excessive amount of drone cells. They usually overdo this. There is some justification in their madness for drones. Variable or inclement weather brings about lack of continuity of drone supply during the queen rearing or supersedure period. It requires about 40 days to mature a drone from the egg. Here is where we find the reason for lack of good mature drones when many are needed every day by the successful large queen breeder.

The fact that comb foundation and its value became generally known about 1880 and that beekeepers could have their beeswax converted into it, gave marked impetus to the beekeeping industry. Many then found that the capacity of a colony of bees was greater than they formerly realized. Powerful colonies of worker bees could be built up by using two 10-frame or larger brood nests instead of one eight or ten frame. Those who already realized that one eight or ten frame was too small to take advantage of the capacity of a good queen became the first to harvest the largest crops of honey. Converting their colonies to much more efficient units required a comparatively few years for some but much time for others. Colonies full of bees, 25% or more drones became 90% or more workers. What a difference.

Comb culling became a necessary and a profitable practice. By comparing a fine all worker comb full of brood with a few poor, defective and old tied combs, the beekeeper soon learned to convert his colonies to efficient units. With such colonies to work with, better beekeeping was rapidly induced and the beekeeper on the road to real success.

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**Wooden Comb.**—An exchange says that Mr. Aspinwall has, this summer, used wooden combs; that is we presume, a midrib of thin wood, with the combs built on each side in the brood-chamber. It adds: If the wintering of the bees in this comb is successful as the summer experience, it will prove quite an innovation in beekeeping. After making, these wooden combs are treated in hot wax, and are readily accepted by the bees, while the treatment prevents any effects of moisture on them. — 1866

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From C. H. Lake, of Catonsville, Md., comes a sheet of comb foundation of his "improved make." It has a parchment paper "mid-rib," the corrugations being made in the usual way by passing the paper, with a sheet of wax on either side, through a foundation roller-mill. He calls it "indestructible," and we presume that it is rightly named; a sheet of the proper size for a Langstroth frame weighs 7 ounces, and costs about 20 cents. — 1888



# WAX FOUNDATION AND REINFORCED COMBS

From the "HISTORY OF AMERICAN BEEKEEPING"

by FRANK C. PELLETT

When Langstroth invented the loose-hanging frame and the top-opening hive, he paved the way for a substantial industry in the production of honey, but two other important inventions were necessary before rapid progress was possible. Until the invention of the extractor and comb foundation, beekeeping was far from easy.

Prior to the invention of foundation, the beekeeper found great difficulty in obtaining straight combs and in controlling the building of drone cells. In his personal recollections which appeared in *Gleanings* in 1893, Langstroth mentioned the difficulty of inducing the bees to confine each comb to a separate frame. He recounted the experience of Della Rocca a hundred years previous in supporting small pieces of worker comb on the bars which he used with his hives. Huber made some improvement of this arrangement, but fell short of "Golding's simple plan of dipping the upper part of his guides in melted wax."

Because of the difficulties mentioned above, Langstroth spent much time in the development of a comb guide which would insure straight combs. The result was a triangular guide at top of frames to take the place of the guide combs. This sharp edge below the top bar provided an

attractive place for the bees to start the combs and proved of some help. Langstroth applied for a patent, feeling that it was essential to the success of his hives. Much delay ensued and similar applications from others finally resulted in the refusal of the commissioner to issue a patent to anyone.

Charles Dadant later told the story in the bee magazines of the effort which he made to secure worker comb during the early years of his experience, before foundation came into use. He sent his son about the country in early spring to buy the combs from all colonies which had died during the winter. Every piece was carefully saved and many small bits pieced together to the best advantage.

Later when Langstroth discovered that the triangular guide had been anticipated by John Hunter in 1793, and long before that by Della Rocca, he expressed great satisfaction because no patent had been issued to him. He had incurred many vexations, loss of time, and much expense, but he regarded these as trifling in comparison to the pain which comes to an honest inventor "when apparent success gives way to bitter mortification of finding the patent absolutely worthless." Hunter had written that, by the use of a salient angle, bees could be induced to build their combs

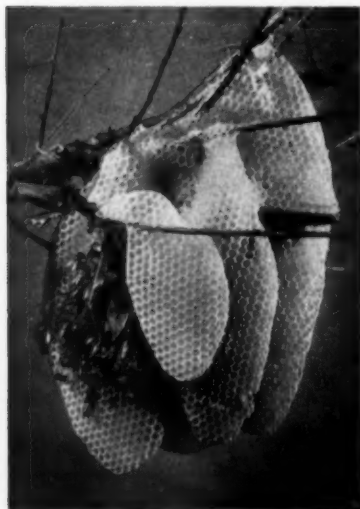


Frank C. Pellett

in any direction desired and Della Rocca had described the triangular device for the same purpose.

Later a patent was issued to another claimant and Langstroth was sued for infringement. By this time, having the necessary information at hand, it was easy to defend the suit, but not without some annoyance and expense.

To get a hive filled with good, straight combs required close attention on the part of the beekeeper. It



Bees naturally build combs like these in this outdoor colony.



Even when given wood frames, they build fingers of comb that later become joined into an uneven comb surface far different from what we want.

was a common practice to place an empty frame between two well-built combs. In this way, the bees would find it quite natural to build the new one in the desired manner.

The invention of foundation must be credited to a German, Johannes Mehring, who first succeeded in producing a crude product in 1857. He invented a press to impress wax wafers with the indentations common to the bottoms of the cells. There were no objections for cell walls, and the bees consequently were less inclined to build only worker comb. Much drone comb was built on such foundation but it did provide a means of securing straight combs. A Swiss apiarist, Peter Jacob, improved the Mehring press, and some of his foundation was imported to America in 1865.

Samuel Wagner appears to have made some attempts to manufacture foundation, adding shallow sidewalls and, in 1861, secured a patent on the manufacture of artificial honeycomb foundation by whatever process made. He was not successful and later dropped the matter. In the meantime his patent probably kept others from experimenting and probably delayed the perfection of the process.

In 1876 *Gleanings* published directions by F. Cheshire for making a plaster of Paris mould on which foundation could be made. In the same issue, the editor comments at length on this and on the foundation made in this country by a man named Long and by F. Weiss, a German.

A. I. Root, with his characteristic enthusiasm, took up the improvement

of the manufacture of foundation, which in its crude form had demonstrated its value to the beekeeper. He employed a man named A. Washburn to develop metal rollers with the proper impressions. Although Washburn actually did the work, he was working under Root's direction, at Root's expense, and it was Root who took the risk of failure: In the March, 1876, issue of *Gleanings*, the announcement is made under date of February 26, "we are happy to state that the metal rollers are a complete success." The impressions were cut out by hand with metal punches.

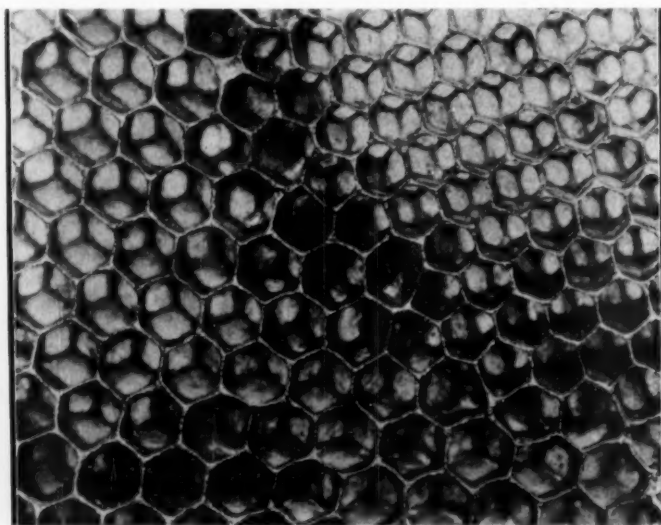
This idea of the metal rollers solved at once the problem of making foundation. Apparently, other workers had thought only of making it on a flat surface in some kind of press. In a letter from Wagner, published in *Gleanings* in 1876, he indicates that he was using a hexagonal type from which he made stereotype or electrotype plates on which the foundation was impressed.

Wagner found his cast foundation very fragile and experimented with paper as a base with the idea that, with a wax covering, it would serve the purpose more successfully. Never has the idea that a paper center foundation would be ideal been permitted to die. Even yet, at frequent intervals, the thing is revived by someone who thinks he has made a new discovery. Wagner reported in the *American Bee Journal*, in 1867, that light and beautiful foundation could be made of gutta percha but that it

soon became so friable that the material could not be used.

It is interesting to note that at the same time Root was developing his metal rollers he apparently had some doubt as to whether he might be in danger of infringing Wagner's patent. In June, 1876, he published several letters from Wagner relating to the work which he had done. In a footnote, Root mentions the fact that Quinby had made comb foundation as early as 1846. It is strange, if this is so, that Quinby laid no claims to discovery, for this was much earlier than Mehring made his invention. In early issues of Quinby's book, he advocates the use of pieces of guide comb to start the bees in the right direction. He suggests that one edge of the comb be melted, or that it be dipped in melted wax and applied to the wood before it cooled. It was probably this kind of foundation to which the reference applied.

There is some question as to just where to draw the line in giving credit to the men who were working toward the perfection of foundation at this early period. There appears to be no question as to Root's having solved the problem finally, but others seem to have been very near to it. A. J. Cook, in the early editions of his *Manual of the Apiary*, states that the King Brothers made and secured a patent on the first rollers. These, however, were mere wheels an inch and a half wide, stamped like the German plates. They were used to stamp the wax that was run on wood solely for guides. The ma-



When the bees want to merge comb fingers (see page 133) they make transition cells like these which seldom are of use for brood.



The Given foundation press (illustration from ABJ and XYZ by Root). It was modeled after Mehring's press.

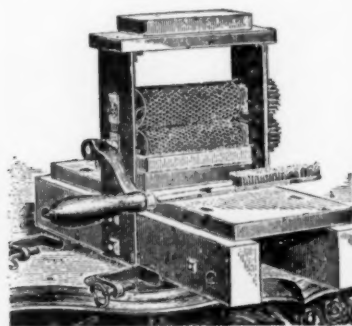
chine proved of little value and never attracted much attention.

Cook credits Frederic Weiss with the invention, in 1873, of the machine which really brought foundation into common use. His rolls were about six inches long, with shallow grooves between the pyramidal projections so that a shallow wall was raised between the cells. Cook states that it was on this machine that the foundation was made by John Long in 1874 and '75 which proved that foundation was a success. As one who had used some of this early foundation, Cook should be a competent witness. He expresses regret at the tendency to ignore Weiss's services. In later editions he credits Root with having brought it into common use, but still credits Weiss with the invention. The Dadant-Langstroth *Honeybee* credits Weiss with the first manufacture of foundation in America, but states that it was probably on an imported machine.

With the problem of making the impressions solved, there still remained the necessity of getting the wax in proper form to run through the mill. For a time the best method known was to dip a board in melted wax and peel off the resulting sheet after it had cooled. This at best was tedious and unsatisfactory.

This led D. S. Given, of Hoopeston, Illinois, to attempt the manufacture of foundation by means of a press which would make the sheet in a wired frame ready for use. This press was described in the bee magazines in 1879 and for a time received considerable attention. Root stated in *Gleanings* that the Given press would make it possible to make up frames with foundation ready for use and to ship directly to the beekeeper as needed.

Given's press was made of metal and produced a fairly good product,



Root-Washburn mill, 1875, was built like a mangle, an approach to the cut mills of today.

according to the comments published at the time. A year before, Oliver Foster made a plaster of Paris cast which appears to have been similar to that described by Cheshire and which he described with enthusiasm. In his published comments he stated that if made of metal, the plates would last indefinitely. Perhaps his suggestion may have provided the inspiration which started Given to work. The Given press was composed of two metal sheets impressed with the cell base form. These were joined together with a hinge which made it possible to bring them together with a sheet of wax between. The plates were then placed under a press built similar to printing presses of that day which would exert heavy pressure. Thus, by shutting the plates together like a book over a sheet of wax and exerting sufficient pressure, it was possible to get a fair imprint. The product was not to be compared with that produced by roller mills and it was impossible to get more than a small sheet, so the Given press was later discarded.

Although Root was far in the lead with his rolls, the difficulty of sheeting the wax left him in position to make but little progress, and he continued to encourage every new method. In 1880 he paid one John Faris, of Virginia, \$143 to come to Medina and demonstrate an outfit which he had made by using plaster of Paris. This was not different from others in important details which made for progress, yet Root appears to have been impressed with it. He stated in *Gleanings* that he was not ready to make the plates for sale under the

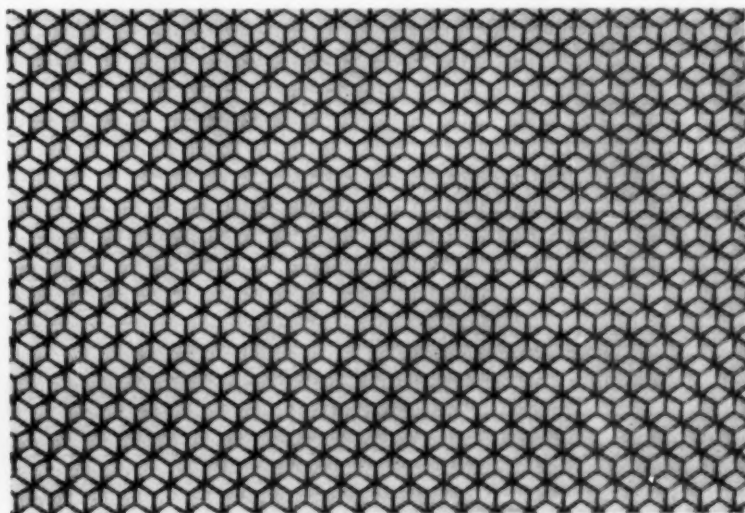
circumstances, although the foundation was better than any made by rolls. He thought that it would be improved and would not have been surprised if rolls had been laid aside entirely by another season.

Following the publication of the account of the visit of Faris to Media, W. G. Phelps, of Maryland, claimed prior invention of the process described. When publishing his letter, Root commented that several others had made similar claims, which indicates that experiment along similar lines was rather common just then.

In the meantime, others were giving attention to the improvement of the rolls. Mrs. F. Dunham is credited with having improved the machine so that the foundation would have a thin base and high, thick side walls. Charles Ohlm improved the method of cutting the rolls and sold his rights to Root. Root thus remained in the lead, although a machine to make cells with flat bottoms was made by J. E. Van Deusen. Van Deusen sold foundation in moderate amount for several years, but his product was not such as to stand the competition of that made from the improved mills which were by then available.

To Captain J. E. Hetherington, of Cherry Valley, New York, probably belongs the credit of originating the use of wire in supporting combs.\* He also originated the foundation with flat bottom cells and obtained a patent for it. Van Deusen manufactured the flat bottom foundation,

\*D. S. Given claimed priority. *American Bee Journal*, p. 2. 1881.



Today's mills turn out correctly lined rows of cells all alike and patterned after natural comb.



paying a royalty to Hetherington. Hetherington also obtained a patent covering the use of all kinds of wire supports for foundation, including wired frames. He seems to have made no attempt to profit from the use of wire but freely gave this invention to the public. The use of wire for supporting foundation is nearly universal, although many different methods of application are in practice. J. Vandervort, of New York, built mills which proved to be more perfect than any at that time available, and, for a time, he enjoyed a considerable reputation on this account.

In July, 1883, Charles Dadant wrote of him in *Bulletin d'Apiculture*, "He is at the same time an excellent beekeeper, a mechanic outside the ordinary and a man outside the ordinary too." He was credited as being the one who had succeeded perfectly so far.

Vandervort sent several mills to Dadant and never sent a bill for them. When fifty or a hundred dollars was forwarded, he would write, "I am overpaid." Dozens of mills were thus

purchased from him at different times with no definite price attached.

The first year that the Dadants manufactured foundation they sold 500 pounds during the entire season. The work was done under a tree in the open, by dipping a board in the tub of melted wax and then, when the sheet had cooled, running it through the hand mill. Six years later the amount had increased to 47,000 pounds in one year. At first, two men would work hard all day to get ten pounds of foundation of indifferent quality. Dadant saw the need of foundation with a thin base and heavier cell walls. When he went to see Vandervort and indicate his requirements, he was able to secure a mill to meet his needs.

About 1892, Dadants received a letter from E. B. Weed, of New York State, to the effect that he was developing a new process by making endless sheets of wax which would later be impressed with the cell forms. He required money in advance to enable him to visit Hamilton and

demonstrate his process with the idea of selling it to them.

The machine was described by C. P. Dadant as resembling a sausage filler, but as requiring refilling so often that little could be done with it, and as producing an irregular product, Dadants advanced further funds to enable him to return home and carry on some further experiments. Two or three years later he went to Medina, where he was able to complete his invention at the Root factory. When he made his contract with Root, he made the reservation giving Dadants the right to use it in consideration of their previous efforts in his behalf.

The new Weed machine forced the warm wax through a slot in the form of a ribbon which was wound on a spool and would provide a sheet of any required length. This solved the one remaining difficulty in foundation manufacture and resulted in the disappearance of all dipping and pressing. Weed process foundation soon superseded all others.

## WHAT ABOUT THE COMBS OF THE FUTURE?

by G. H. CALE

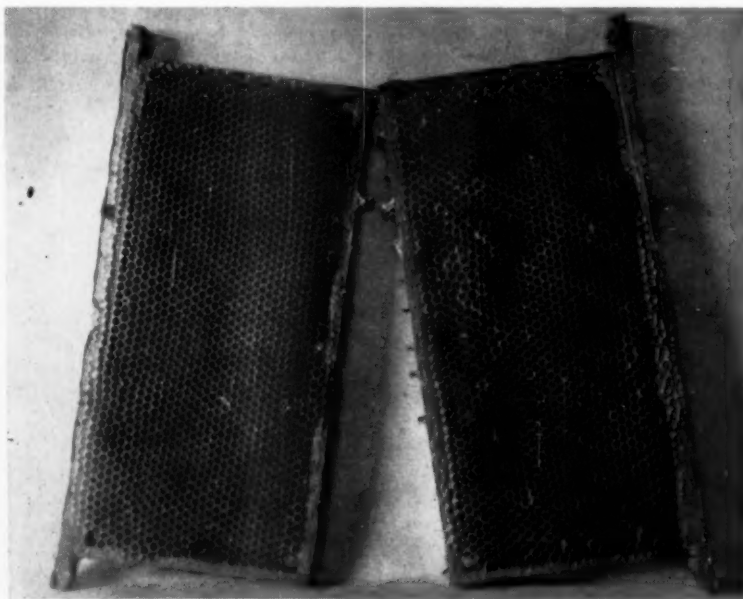
Bees have always made their own combs. Silly statement? Yes, but with much bearing on what man has done to beat them at their own game. If beekeepers had been satisfied with the bees' efforts to provide their own combs we would still be content with the very combs we now consider unfit to use.

What are we aiming at in comb production? Seems obvious that we demand combs with none of the objections in the combs that bees produce by their own efforts. We don't want combs with areas unfit to use for brood or for honey; we don't want combs that buckle or twist when they are in use; we don't want combs that have any barriers to the free movements of the bees; we don't want combs that do not provide, as nearly as possible, maximum cells of worker size for the production of worker brood and a minimum of cells for drone brood.

We know that the nearer the combs in the hive approach our conception of perfect combs the bigger our colonies become for the honeyflow and the greater our crops will be. To take full advantage of this increasing comb perfection, we need only those queens in our colonies that are capable of providing a large

force of bees whose unrestricted capability results in increasingly larger crops. Indeed we would go further than that. We would like to employ these superior qualities of our bees to use the egg production of multiple

queens so we have to use ladders to reach the tops of our producing colonies; or devise a take-off plan that forces us to completely alter our use of supers to suit our new found colony capabilities.



These two shallow extracting combs are examples of the kind we used to get when they were built in the heat of the hive.



Without the very best combs we can use in our hives, we fall short of the full benefit of this alluring picture.

The manufacture of bee comb foundation has been vastly improved from the early days of beeswax sheets with their milled impressions of cell bases. It took many years to realize that, even with constant improvement in machinery and in quality, we were not much further away from the combs the bees made than we were when we had no comb foundation.

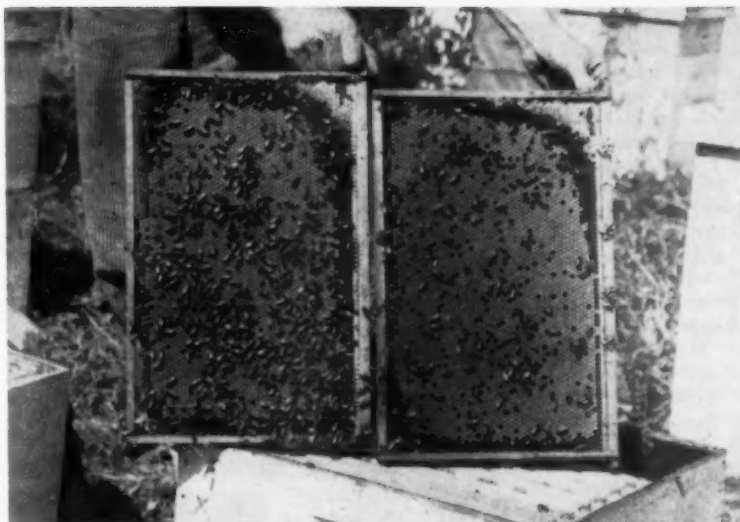
The beekeeper took his wax sheet that produced his imperfect combs and tried to wire it in various ways to stop the bees from having free reign in tearing out our wax and replacing their own—drone areas, transition areas, gnawed areas—to stop distortion in use like sagging, folding, breaking.

Then the foundation maker decided to try to solve these problems by wiring foundation for the beekeeper; by edging foundation sheets; by improving hives for the better use of better foundation; by making better frames. In the future of the industry we may be sure every effort will be made to further improve bee comb foundation.

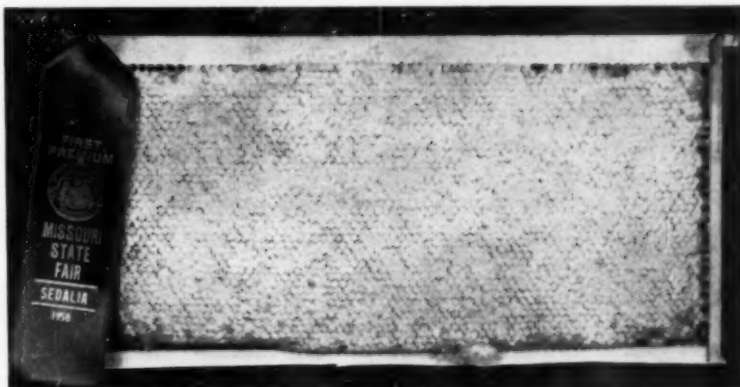
However it takes time and use to know whether an imagined improvement is really an improvement or whether it develops objectionable features as time passes. Many attempts have been made to produce comb foundation with bases other than beeswax—paper, wood, metal and other materials. The latest is foundation with a base of thin aluminum. Already some possible objectionable characters make us wonder how it will stand up in use. The conductivity of metal may make such foundation of value mostly in supers. Also bees do have a habit of trying to round comb corners at the base. If they can't do this they often leave corners uncovered and later build back with wax to form useless areas.

Maybe metal is not the answer. Maybe some future material not now available but still coming "off the drawing board" will suddenly give us what we want. We must keep in mind too that we beekeepers share in the things about foundation we don't like. We often damage combs; we move bees long distances; we expose combs to extremes of heat and cold; we whirl them at fantastic speeds and whop them about as though they were as solid as Gibraltar.

*(Turn the page please)*



With well milled beeswax foundation, supported by wires or metal, combs are often built like these two Modified combs, top to bottom and side to side with worker cells; brood that releases a maximum of field bees.



Combs of honey are complete and full weight; prize winners.



Comb honey in glass tops the competition, like this prize display from the Killions at the National Honey Show.

ter. If combs get damaged we grumble and consider it's not our fault.

We know what we want though. We want combs that we can subject to all the demands of present and future practice. We want combs so perfect that they go clear to the comb bottoms and stay there. We don't want colonies in winter to be compelled to traverse the no-man's land between comb tops and bottoms. We want the bees to be able to nestle on winter stores all winter; we want them to start brood toward the winter's end. For early buildup; we want bodies of comb those future queens can lay in as fast as they wish. Yet we want to abuse our combs. We want to whirl them

fast; to handle them roughly; to keep them forever; we want a flexible machine that suits every use of tomorrow.

But let us remember, the combs we get from the finest materials we may be able to imagine, won't take our place. We must get the combs from the bees; we can't make them. We must see that the bees make them at the right time and then we must keep those perfect combs for years and years. We must not merely talk about comb replacement. We must actually practice replacement. How many of us do?

Into our practice must creep the need for revaluing our combs under

conditions unhampered by season or by imperative management. To do this and really pay the attention to the combs they deserve as the most valuable of all our beekeeping equipment, we must release them from use long enough to recondition or replace them. This demands taking them out of use. It demands a management plan that allows reconditioning, not only of combs but of all hive equipment. All future beekeepers must have a plan like this if they want the best for themselves and for their bees. Remember the comb foundation of the future may do a wonderful job for us but we must do a wonderful job for ourselves too.

## Amos Ives Root

### A Biography

by H. H. ROOT

Since the Root Company figured prominently in the development of bee comb foundation, we asked his son, Huber, to contribute this biography of his father, founder of that organization.

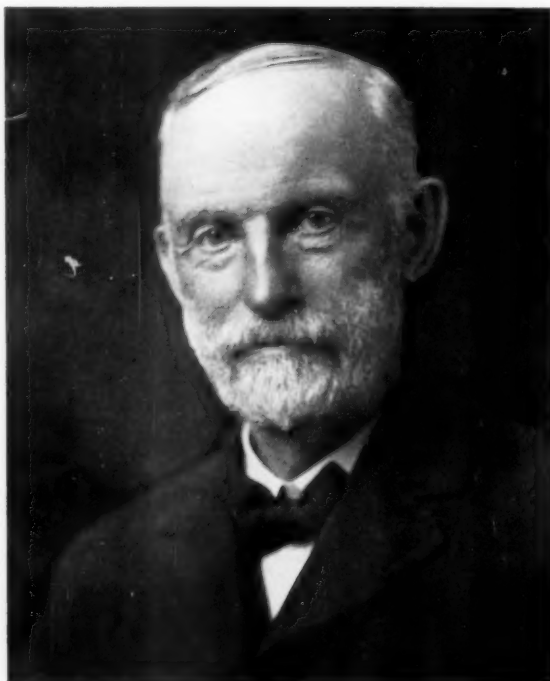
My father, never a strong man, often had to quit new projects because of ill health. When he was about thirty-five the doctor told him that a lung infection was likely to end his life within a year, that he had better make preparation for leaving his business to others. Father had such a strong will to live that he outwitted the doctor and managed to live until he was 84 years of age.

#### *Basswood Orchard*

Dr. E. F. Phillips of Cornell University, formerly in charge of beekeeping at the Bee Culture Laboratory in Washington, D.C., wrote a story of my father's life and he surprised both my brother and me by saying that father's interest in bees lasted little over 11 years. Ernest and I could hardly believe him. However, we found it literally true. At the end of 11 years, father's health had failed to such an extent that he thought he should be outdoors in the sun, and gardening became his main project, both the raising of flowers and of vegetables.

Father made his gardening project dovetail with his interest in bees and one of his first exploits was to plant seven acres with young basswood seedlings. This was two miles north of Medina, the only basswood grove in all the world. It was not a success, for the nurseryman from

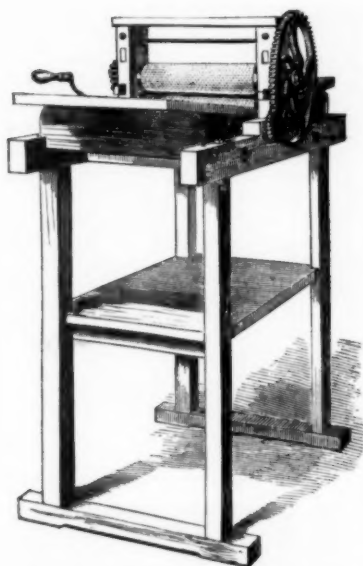
whom he bought the trees told him that if he wanted a lot of blossoms he should let several main trunks grow at each spot. The world did not know that basswood or linden, as it is called in Europe, needs the support of other hardwood trees, such as maple, ash and oak. The trees were straggly and because each tree had three or more trunks, they amounted to very little for lumber. Several times men from the United States Department of Forestry came to Medina to see the only basswood grove in the United States or, as they said, in the world.



AMOS IVES ROOT

#### *He Planted No Dandelions*

Father was interested in dandelions and in a short while the great number of dandelions found on the lawns of homes in Medina led to the story that father had planted them all over town to make honey for his 500 colonies of bees which at that time he had inside the corporate limits of the village. (Dandelion honey is nearly as bitter as quinine. Dandelions for bees are valuable chiefly as a source of early pollen.) Father did plant dandelions in his own garden but they were of a giant variety, a member of the dandelion



An early Root foundation making machine, still cranked by hand.

family but totally different from the dandelions we know today. They stood two to three feet high, the stalks were more than one inch in diameter and the blossoms looked more like chrysanthemums. They did not do well and subsequently died out. The reason there were many dandelions in Medina was because of the natural sweet soil, mainly clay, and because, with an over-population of bees, every blossom had eight or ten bees working on it, not so much for honey as for pollen.

Dr. C. C. Miller of Marengo, Illinois, was likewise accused of sowing dandelions over the town for he had over 200 colonies of bees close by Marengo and again, the soil being clay, the lawns were covered with the golden blossoms. However, Dr. Miller had never planted dandelions of any kind.

A druggist in Wadsworth, 12 miles away, fifty years ago, tried in vain to get dandelions to grow in his backyard and he came to Medina repeatedly and dug them up. However, there were not enough bees to pollinate the blossoms and his soil was a gravelly loam, unsuited for the dandelion.

#### *A Beekeeper by Chance?*

Father's interest in bees, while it lasted only 11 years, led to the development, if not actual invention, of a number of great projects. At the time a swarm of bees flew overhead and a workman brought them back to father in a burlap sack, there really was little known about honey

production. Bees were kept in hollow logs or in wooden boxes and in the fall were killed with the fumes of burning sulphur and the honey dug out with a spade.

#### *One Piece Section*

There had been small boxes proposed for the bees to store their surplus honey in and one of father's first experiments was with the so-called one piece section or box. Slats of basswood were sanded and grooved in three places so that a box could be formed by bending at the grooves, the corners being notched to form a square, holding about 11 or 12 ounces of honey. These the bees filled.

#### *Nobody Claimed the Money*

There were many stories in the '80's about artificial comb honey. The Ladies Home Journal and other magazines carried such a story. It got into an encyclopedia. In order to stop the story father offered \$1000 for a single section of comb honey that could be proved artificial. Comb honey was genuine and has remained genuine to this day. No samples were offered.

#### *Multiple Story Beehives*

Father developed the multiple story beehive, each story being exactly like every other story and because the hive was so simple he named it the *Simplicity* beehive. It was the first beehive he knew of which could be tiered up so the bees could put their surplus in upper stories.

#### *Comb Foundation Mill*

Probably father's most significant invention during the 11 years was that of the comb foundation mill. Father never claimed to have invented comb foundation. The Germans had found that bees, whenever they attach comb to another comb already built, attach it not at an angle but always in the same plane and then someone discovered that even though the cells of the original comb were shaved down with a razor, as long as there was a suggestion of the hexagonal wall left, the bees would treat that as a pattern and build worker comb on it. They attached their comb to the pattern, again as I have said, always in the same plane. Father knew of this experiment for he was reading all of the news about bees. The Germans had tried to produce a wax pattern in a device much like a waffle iron today. They spread melted beeswax over the lower part and brought down the upper part, making a crude pattern-like material of the center of a honey comb. It worked after a fashion but it used too much wax and it was not a commercial success. My father,

turning a wringer for mother one Monday morning, observed the tremendous pressure on the wet clothing with slight effort on his part turning the crank and he observed to mother that if this new comb pattern ever became practical, it would undoubtedly be made by passing sheets of beeswax through double rollers, properly engraved to give the sheet the embossed effect of the bottom of the honey comb with the hexagonal cells just started. Father made an attempt to make such rollers but he needed expert help and he engaged the services of an expert mechanic, Alva Washburn. Father and Mr. Washburn, working almost day and night for several weeks, produced two copper rolls with such a degree of accuracy that their comb foundation was something beautiful to behold. He announced the success of the undertaking and had such a flood of orders that those copper rollers were worn out in less than a year's time. Attempting to reproduce their work with another pair of rolls, they met with failure only. They had given their best to the first undertaking and were never able to do as well again.\* Father and Mr. Washburn, confronted with hundreds of orders which they could not fill, developed a machine for stamping or engraving metal rolls. This was in the late '70's and this machine is still in existence as well as a so-called "new one" developed and built in the year 1900.

For many years Medina was the home of the only machine that could build what is now known as the comb foundation mill. Later on the Germans and the Belgians began producing rolls. Father never claimed to have invented comb foundation but he did invent and succeed in producing the first successful equipment for producing the product.

#### *Metal Honey Extractor*

Father did not invent the honey extractor. Again it was a discovery made in Germany. The traditional story is that the little son of a beekeeper, given a piece of new honey

\*According to Pellett (History of American Beekeeping) A. J. Cook credits F. Weiss with the first foundation making machine with rollers. Dunham, Ohn, Van Deusen, Vanderbilt, and others were early in mill manufacture by hand. There is no doubt, however, that A. I. Root popularized and perfected the machine, as well as producing a machine for making the foundation rollers or mills. (Ed.)

(Turn the page please)

comb by his father, got tired of eating it, put in a basket, tied a string to the handle and, boylike, began whirling it around his head. A few drops of honey struck the beekeeper in the face. He looked at the comb and found the cells nearly empty. Here was the birth of an idea. The Germans built the first honey extractor by putting the combs in a barrel which they whirled. The honey would not run down the side of the barrel, however, until it stopped turning. The barrel was of wood and unsanitary. Father made the first all metal honey extractor and only the reel turned, therefore, the honey would start running down at once.

Father found that to ship bees on combs was very expensive and more-

over the combs were frequently broken in transit. Over a series of long experiments, some of them very expensive, he developed the first combless package for shipping bees and he often shipped three or four pounds of bees in a combless package. Since there are about 4,200 bees in a pound, he frequently shipped nearly 20,000 bees without comb.

#### *Revived ABJ and started Gleanings*

Father revived the only bee journal printed in the United States, the America Bee Journal. It had been discontinued during the war but he encouraged the editor to start again and promised to keep contributions on hand enough to keep it going. That he did for several years until he started one of his own to be a

quarterly at first,—mainly a means for answering questions that had come to him by the hundreds. He called it GLEANINGS IN BEE CULTURE. The quarterly was turned into a monthly. This was in 1873 and GLEANINGS IN BEE CULTURE today is probably the only agricultural magazine known to be published continuously more than 80 years by one organization. In all these years in writing for the beekeepers father had developed the facility of writing or dictating rapidly in language so clear and terse that it needed no editing. In fact, while I, myself, as a young man, occasionally took down father's dictation, I do not recall seeing him or anyone else make a correction.

## One Hundred Years Is A Long Time

by Jack Deyell

Editor, Gleanings in Bee Culture

When I was asked to contribute something to the 100th Anniversary of the American Bee Journal, at first, I thought it would hardly be possible to write anything worth while. However, after thinking the matter over, it occurs to me that since I have had some interesting experiences during recent years and have had a chance to watch the industry grow, that I would send a short article to the ABJ Editor, Gladstone Cale.

I find that Gladstone has been on the ABJ staff for about thirty years while I have been on the Gleanings staff almost 26 years. Even though we are in one sense competitors we are still on speaking terms, in fact, we are good friends. Sometimes an article or letter is addressed to the American Bee Journal, Medina, Ohio, and at other time a letter is addressed to Gleanings in Bee Culture, Hamilton, Ill. Of course, Gladstone and I then have to get matters straightened out.

We two fellows have never had a chance to have a good visit, even though we have appeared on the same programs over the country. We tell each other that some day we will take a week off to go on a fishing trip so we could talk bees to our hearts' content. Such an event has not yet become a reality.

There have been a number of interesting developments during the years but in my opinion, one of the most important is transportation in bee-

keeping. In the old days comparatively few beekeepers maintained outapiaries, except possibly a few of the commercial men who used wagons to transport bees and supers to the outyards. It was quite common in those days to set up an extracting outfit at each outyard, then haul the cans of honey to the home apiary house. The supers were usually stored in a building at the outapiary.

Many beekeepers kept over one hundred colonies in the home yard. It was possible for those beekeepers to become well acquainted with their bees. In fact, they knew the queens in most of the hives and understood their idiosyncrasies. Most of the colonies were operated for the production of section comb honey. The comb honey era extended from 1876 to 1906. During that era much was learned about bee behavior, since it was necessary to build up populous colonies and control swarming in order to secure the maximum crop.

At the present time commercial men operating a series of outyards usually manipulate apiaries instead of individual colonies. I am of the opinion that commercial beekeepers with many hives of bees in outyards to check through in a limited amount of time, have to rush through their work so fast that they do not have much time to observe bee behavior and perhaps miss some of the pleasure that can be derived from beekeeping.



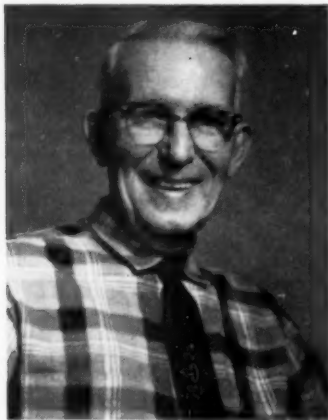
Editor of Gleanings in Bee Culture,  
Jack Deyell

### *A Five Hundred Mile Bicycle Ride To See A. I. Root*

I had the privilege and pleasure of associating with the late George S. Demuth, former editor of Gleanings in Bee Culture, for thirteen years. Mr. Demuth lived near Peru, Indiana, where he kept a few hives of bees early in life and later operated over two hundred colonies for comb honey production. He was said to have been one of the best comb honey producers in this country.

As a boy he read Gleanings and was a fervent admirer of the late A. I. Root. Mr. Demuth decided to come to Medina to visit with Mr. Root so made the trip on his bicycle. I can imagine the dirt roads were none too smooth in those days. After reaching Medina he decided he should have a haircut and as he sat in the barber shop awaiting his turn he saw a man riding by on a bicycle with some supers tied on his back





Gladstone that Jack mentions (or Glory).  
Editor of The American Bee Journal.



with a rope. On inquiring who the man might be Mr. Demuth was told that the person was E. R. Root who was carrying supers to an outyard two miles north of Medina. That was one method of getting supers to an outyard.

A little later that day Mr. Demuth did meet A. I. Root who invited him out to dinner. While the meal was in progress one of the factory men came running into the house to tell Mr. Root that a swarm was issuing from one of the hives nearby. And so, Mr. Demuth had the extreme pleasure of watching A. I. Root hive a swarm of bees.

I told Mr. Demuth he should write up that story for Gleanings but he never did get to it.

#### *Moving Bees by Hay Rack*

The spring of 1917 I bought 210 colonies from a beekeeper at Humphries, Michigan, about eight miles from Copemish. I supposed it would be possible to leave the bees on that location, at least for one season but the beekeeper from whom I bought the bees made it plain, after I had made a down payment, that the bees would have to be moved. I found a location about fourteen miles away. The bees had to be moved eight miles by rail in a stock car and six miles in farm wagons with hay racks. This naturally necessitated a considerable amount of planning ahead. Four farmers with wagons and hay racks met the car of bees. The hives were transferred from the car to the wagons. One of the men with a spirited team had been imbibing a little too freely and was in no fit condition

to drive his team in the event that the horses got stung. Fortunately there were no accidents and the bees were delivered to destination in due time.

With present transportation facilities a large truck could be used for transporting the bees and a considerable amount of time would be saved.

Hives of bees are now transported from north to south and from south to north by truck. Packages of bees are flown from continent to continent.

A few years ago we had a visitor from Santiago, Chile, who mentioned the possibility of his establishing an apiary in one of the Canadian provinces of the west. His plan was to remove the surplus honey at the close of the season, shake the bees from the brood chambers into combless packages, then fly them to Chile in time for them to build up for the

major flow in that country which would occur during our winter months. After harvesting a crop in Chile he would shake the bees into packages and ship them back to western Canada in time to secure a honey crop there. This would surely be working the bees overtime, as well as the owner of the bees.

The foregoing may sound somewhat fantastic but who knows what will happen in our industry in the near future?

Even though some progress has been made in beekeeping during the past century there is plenty of room for further developments in producing better bees, better beekeeping equipment, better methods of apiary management and last but not least, better marketing methods which will give beekeepers a wider margin of profit for their products.

### **The Cover Picture**

Ever see a bad, old comb, with thick, no good cells, old useless queen cells? Only part that is good is that honey at the top. The drone brood won't profit one either. Modern bee comb foundation has ended most of this loss and inefficiency.

## **Sense and Nonsense**

1870

If you listen by a hive about nine o'clock, (on a summer evening,) you will hear an oratorio sweeter than at Exeter Hall. Treble, tenor, and bass are blended in richest harmony. Sometimes the sound is like the distant hum of a great city, and sometimes it is like a peal of hallelujahs!

—Rev. Wm. C. Cotton

A cute American naturalist has observed that the bee as it flies from the hive is oddly enough, going to hum.

After a wedding, it was formerly a custom to drink honey dissolved in water, for thirty days. Hence the origin of the honeymoon.

Bees are much offended with long hair on head or face. Let such, therefore, as must be often among them, wear short hair, or be well covered, on peril of stinging.—Purchas.

Let me strongly advise the incorrigibly careless to have nothing to do with bees, either on my plan of management, or any other; for they will find both time and money almost certainly thrown away.—Langstroth.

Like the thoroughbred scold, who by the elevated pitch of her voice, often gives timely warning to those who would escape from the sharp sword of her tongue, a bee bent upon mischief raises its note almost an octave above the peaceable pitch, and usually gives us timely warning that it means to sting, if it can.

The common but ridiculous practice of making a clatter with kettles, tin pans, coal scuttles, etc., when bees are swarming, is utterly useless, and is resorted to only by old foggy beekeepers.

The sting of a bee carries conviction with it. It makes a man a bee-leaver at once.

A Chinese version of the saying, "How doth the little busy bee," is as follows, and was sent to us by one of our subscribers:

How? Sie belly small chin chin sting-bug

Im-im-improve eibly sixty minnit all a time.

Go, pickee up sting-bug juice all a day  
All kin' places 'loun' flowels just got busted.



# The Commercial Operator

FLASHBACK . . .

## Mov'Em Out — Let's Go

Remember when we battened down all the hatches to get colonies ready to be moved? First, we began by looking over the entire hive for holes and they were stuffed with tissue to make sure the bees could not come out in moving. Then we stapled the bottoms to the hive edges and stapled the supers together if there were supers already on the hives. Finally we put deep screens on top and stapled them on, making sure there were no places along the edges from which bees could emerge. Then, the next morning early, we nailed on entrance blocks or, in hot weather, entrance screens, v type, or porch screens with wide edges for cluster-

ing space. At last onto the truck they went and away we went. At the new yard we hustled the bees off and got those entrance screens off gently. The better part of two days was used for the job.

Then came the day when we were in a hurry and just stapled on the bottoms and, next morning, put in v screens at the entrances as we loaded. And it worked. But there was still that early morning job and the move to the new location.

One day we got a call to get our bees "to h - - out of there" because the land owners wanted to bulldoze the ground where the bees were. Away we went, a hundred miles.

No choice this time. What to do? We smoked and smoked the colonies and continued the smoking as we loaded in full daytime. As the field bees came in they stayed in. Several of the weakest colonies were left to catch the remaining incoming bees and the bees were loaded slowly and carefully on the truck with the engine running all the time. At the new place the bees were smoked again and taken off just as carefully. Back at the old place there were few left-behind bees to show much difference in the catch colonies.

Now, our bees are moved anytime with no preparation. How things change!

## 706 FOUNDATION — A NEW EXCLUDER

by EDWARD G. BROWN

In the early thirties we had a yard of bees that needed supers badly and we had nothing but washed wired frames with no foundation to put in them and no time to put it in. So we pulled one comb out of the middle of the top super, usually solid capped, and slipped an empty frame in its place. We put this full comb in the middle of a super of empty frames, spaced them, and put them on top of the full supers and let the bees work out their own ideas for handling the last week of a heavy honeyflow. The results were that the empty frame in the full super was drawn out and filled. In the empty super there were one to three fairly straight combs each side of the full comb raised from the super below, and there were some in which nearly all the combs were drawn straight. Others were a mess of crooked combs but we got nearly a super of fine honey per colony.

When we were extracting the straight combs, my son, E.G., Jr., (Ted) noticed that some of the colonies had drawn a lot of worker sized comb instead of all drone as you would usually expect, and that a

number of colonies had built a larger worker cell than the cell in regular medium brood foundation. That winter when Ted was visiting with Roy Grout at the Dadant plant, he told Roy about this larger cell and Roy told him about some experiments he had made with various sized cell foundation when he was studying the relation of cell size to the size of bees hatched. Roy said the standard foundation cell was 857 cells to a square decimeter of comb, counting both sides, and that they had some that were 763 and 706. Drone comb was about 550 cells.

We did considerable experimenting in the yard where we had used the empty frames in supers. The colonies that built the larger cells readily took to the 763 but we had to force them to raise brood in the 706. The other colonies would hardly use 706 at all for brood.

After a few years of working with these experiments in standard depth combs, we started using modified depth shallow extracting supers, equipped with 706 wired foundation. For the last ten years we have worked our outfit into this type of

equipment and find that it worked very effectively as an excluder without restricting the movement of the bees. Occasionally there is a queen, when crowded for room, that will lay some worker eggs in these combs and some smaller type queens will occasionally lay a few drone eggs in them, but this happens rarely. Another advantage of the larger cell is that they extract faster and cleaner with less breakage. This is especially true with very thick honey.

We produce considerable cut comb honey and find the 706 cell cut comb foundation extremely satisfactory for this work as pollen and brood are almost entirely excluded, especially if produced over one shallow super of 706 cell extracting combs. It also produces a comb honey with less wax content.

Our experiments with this foundation cover a period of over twenty-five years and the operation of twelve hundred to fifteen hundred colonies of bees. The foundation we used in this work was purchased from the Dadant Company. They furnish it on special order.

# AFB IS STILL WITH US

by ROBERT M. MEAD, Vermont Apiary Inspector

For several years I had been rather self-assured on the matter of American foulbrood among Vermont bees. True we always found some but the percentage was low and I even had visions of a day when inspectors would be out of a job. Then in 1959 we (Bill Damour has the two southern counties) found more disease and burned more equipment than we had for years. In some small localities AFB literally exploded in our faces.

Why? Probably more than anything else this experience points up the fact that bee disease is a continuing problem. Every time we get it licked it pops up again and if it were not AFB then it would be something else.

We accepted the antibiotics as miracle drugs and I do believe they are useful but they are not a 100% answer. Sulfa drugs and terramycin have been used in large quantities for a number of years now but it might be a good question whether their use is eradicating disease or simply breeding more resistant and virulent strains of disease. I have had some absolutely wonderful cures with terramycin that stayed cured. But on the other hand I am sure that in some cases a few germs survived each treatment so that in the end burning was the final answer.

Perhaps I should say that people, rather than AFB, constitute the largest problem. We have beekeepers who just absolutely love their bees but they cannot take time to learn to recognize bee disease and they cannot quite get the picture of its being a germ so they spread it in every way imaginable.

I do have a cure that works rather well if it is done right. It is a variation of the old shaking idea. Only colonies with plenty of bees left should be treated. The treatment is simplicity itself. All infected material is removed—that is all brood and all honey—the bees are shaken on to clean combs or foundation and either fed a sulfa sugar syrup preparation or dusted with a mixture of terramycin and powdered sugar. In the northern states this treatment cannot be done too early and should not be done very late if the bees are to get well reestablished before winter. The job should be done quickly and quietly and all the diseased material removed should be destroyed.

I have wondered what became of the idea of resistance. I know that resistance is not a myth because I have seen colonies that could live on foulbrood honey without showing the disease. And a few years ago about every advertiser for queens mentioned a resistant strain but nowadays one can hunt a long way to find the word. Was real resistance too much of a problem for queen breeders?

We had resistance—we have antibiotics—we have treatments—but we still have AFB. And we still build fires and bury the ashes. Vermont

## Are You Queen Conscious? You Should Be!

by D. G. HOLTERMAN

*A colony is no better than its queen.* After spending several spring seasons with top queen and package producers in the South, I believe that they do their best to give a good product. Weather conditions interfere some at times.

Superseding in package queens has caused some dissatisfaction but the answer is not certain. It has occurred to me that the presence of lots of young nurse bees without consecutive young brood to feed produces unrest that may lead to superseding. A normal colony with all its brood suddenly removed will often do the same thing. It is just possible that at least one frame of very young brood given the package at installation time would bridge that gap. Successful package buyers believe that the queen, when shipped in the package, should be released at installation time too. This installation is often done in a dark room under a yellow light where they remain for a couple of days or until the weather is suitable. This way the colony is established and little drifting occurs if trees or brush give definite location marks. *A uniform row has no place in a bee yard.* Buyers have been known to say that they receive old bees. This is not the case. During shaking, the old bees are induced

by a drift of smoke to take wing and return to the hive. At this particular time they are more valuable in the South to gather pollen. Ontario

## Honey Importation Into France Free

We recently reported that importation of honey into England is now free of restrictions. The same thing is announced for France. This does not mean that the honey is free of duty. It simply means that there are no restrictions on the amount of imports. Some of the French bee magazines are criticizing such a policy. They say that the finest of foreign honeys can now be imported into France, pay the transportation and duties and still outsell the domestic product.

With the per colony production as low as it is in France we can see their anxiety about the effect on the French beekeeper.

## Bee Colony Registration Adopted In Indiana

Following hearings before the Department of Conservation at Indianapolis there was adopted a regulation effective April 1, 1960, that all colonies of bees in the state must be registered and the Chief Apiary Inspector notified of ownership. Similarly any changes of location of colonies must be reported to the Chief Inspector. Gilbert Perigo of 311 Washington St., in Indianapolis is inspector for the state.

## 1959 Honey Prices

According to the Crop Reporting Board of U.S.D.A. average 1959 wholesale prices on extracted honey in bulk stood at 12.5 cents for the U. S. as against 12c in 1958.

By sections those where the average was even or more than in 1958 were the New England States, Middle Atlantic, West North Central, South Atlantic, Mountain States. Where the average received was less than in 1958 were the East North Central, West North Central, East South Central and the Pacific Coast States.

Average for the U. S. shows 12c in 1958 as against 12.5 in 1959.



# The Sideline Producer

## FLASHBACK

### The Things We Used To Do

So many things we used to do as Sideliners that we do not do anymore. We used to like to sidle down in the grass by the entrance of a colony and watch the bees come and go; some heavy laden pollen carriers—yellow pollen; pink pollen, orange pollen, (fruit bloom, red bud, dandelion?) And the heavy nectar carriers that slid to a stop somewhere along the entrance, then struggled in, often falling sidewise they were so burdened. Also the fanners buzzing out of the way of the throngs coming and going. The guards, too, demanding a visa from strangers. If the strangers carried pollen or nectar, they were allowed to enter. But if they were darters, evidently trying a sneak entrance, wow, what a difference. There was

a ringside fight until the robber gave up or got himself dismembered. We forget the time until someone called "Dinner!" Remember when we did that?

Remember too how many times we loved to open colonies, not for any purpose, but just to look; at brood; at nectar or pollen storage; at eggs and larvae. We did not necessarily do anything. We just looked.

But we did do most of the jobs we considered necessary, many of them not really necessary. We did replace queens when it seemed best; we fed the bees when we thought we should; we fiddled and fussed with many things that seemed quite demanding.

As time passed, without being

aware of change, we quit doing a lot of things, maybe because we did not have the time or maybe because the glamour was gone. Some quit the bees then. Some kept on because we found that, with so much less attention, we began actually to receive a profit, even from a few bees. We became commercial beekeepers because the profit made us so. Some became full-time commercial operators; some remained sideliners but we were strictly commercial just the same. There are many in that class. Maybe we miss the romance but so many new ideas and changes that are really necessary come along constantly that the interest rate remains high. We are still beekeepers; and once a beekeeper, always a beekeeper.

## Preparing A Beekeeping Demonstration

by John Van Horn

I am not an author, but with my limited experience, I will try to help someone prepare a demonstration. I am only 14 years old, and am not an authority by any means.

I cannot choose someone's subject for a beekeeping demonstration because there are many which you may choose; for example, installing package bees, feeding bees, showing parts of the beehive and their uses. These are only a few, but you may find many more in the *American Bee Journal*, *ABC-XYZ of Bee Culture*, or in many other books.

The purpose of a demonstration is to tell and show someone else how to do something. Most of my demonstrations have been for county or district competitions, and for clubs and local groups.

In preparing a demonstration, know your subject completely, because if you don't, you will become confused and your demonstration will be poor. If you are giving a demonstration on how to feed bees, for example, read all you can on the subject. Then with your agent, begin work.

When preparing your demonstra-

tion, always write it out because if you don't, you may become confused and even leave out ideas which are essential to your demonstration. The equipment is also *very* important, for if your equipment is poor your demonstration will not be as impressive. If you are not able to buy new equipment, then fix up the old! Use only the minimum of equipment because if you have excess materials you may fumble around looking for something and even knock something over in the process.

Either learn or memorize your demonstration. To do this, say your talk over, and over again. It is very important to know exactly what you are to say. It is much better not to memorize your speech because you can easily forget your demonstration if it has been memorized. Next, put actions to words. I mean by this to do your demonstrating while talking. Do this over and over, because if you don't you may pick up the wrong piece of equipment at the wrong time.

You cannot work twenty-four hours a day on your demonstration, but work at intervals until the time

comes to give your demonstration. Say it over to your parents, agents, and to anyone else who will listen, and who will help. If you are shy, and don't wish to start out saying it to anyone, obtain a tape recorder if possible, and use it. The recorder is not as helpful, because you must become accustomed to talking in front of people without getting nervous. If you do become nervous, your speech will become jittery; you will talk faster, and faster, and your hands will perspire. Then you will probably do something wrong. After you have put your actions to words, you are still not finished. If you are going to a district competition, try to give your demonstration in the county.

In the state of North Carolina there is much competition, so "If at first you don't succeed, try, try again," for it may take several years to come up with a good demonstration. After you have prepared your demonstration, make sure that you have everything complete and have left nothing out. Always try to get your point across with the greatest stress possible. This is very important! For if you are being graded, this will count a great deal.

In conclusion, I will say just this, "Practice makes perfect." So work hard, and good luck!  
North Carolina





## OH HONEY!—BEEES!

by Harvey Bevers

National Honey Week was observed throughout the nation, not so much to induce folks to eat more honey, and furnish it to growing children for the valuable vitamins, minerals and acids it contains, but also to acquaint folks with the valuable role bees have in pollinating the wonderful oranges from California and Florida, the delicious apples from Oregon and Washington, not to mention their great value to field crops, gardens and flowers.

An interesting display of "Educated Bees" was shown in the Alamo National Bank Lobby, with a large variety of honey for table use as well as darker honey for cooking, as the darker honeys contain more minerals, than do the table varieties, and are therefore more valuable for children and the aging.

You will say: "Educated Bees BAH"! They should be. They started their home on a mesquite limb in a back yard as no one would furnish them a home, and they, with the limb, were placed in the observation hive to watch their development, and were displayed in a State Banking Institution for a five day "refresher course" National Honey Week, 1958) and then they had another five days in a National Banking Institution. They showed much improvement over last year, as we got about fifty pounds of most delicious honey from the two supers over the brood-nest in the observation hive, that we are anticipating great results again next year.

So many questions were asked the Bank's Receptionist, Miss White, that I supplied her with an 800-page bee-

keepers manual and another family of bees; "MOM - POP, and workers" displayed in a clear plastic sandwich box thus avoiding a "Traffic Jam" to see the Queen Bee. I think we should have used the slogan: "BEE -

WISE - and SAVE," as a courtesy to the Savings Department. W.O.A.I.-T.V. ran an excellent display on their "Farm Hour" program so these bees not only had training but popularity. Texas



## A Rare Privilege

The season before Easter is a privileged one for it is a time of dedication to a humble service first rendered by an Essene and a fisherman to Jesus at his resurrection. Our inspiration is in the gospel according to St. Luke, Chapter 24, verses 41, 42 and 43. Two fine articles in the bee journals have helped: in Gleanings in April, 1959, by Alan Root; and in the American Bee Journal, in August, by Cale.

Slips and folders with the picture of the above mosaic are available for those who want to distribute them.

You can call at your church office to arrange for passing them out. Leave a generous token of honey for the Easter church breakfast.

The Cook Dupage Association (Illinois) have prepared attractively illustrated printed pieces to aid with this project. A postpaid packet of 50 Easter Keepsake folders and 10 gift package inserts will be sent on receipt of \$1.00 to cover the cost of preparation and mailing. Order from A. C. Ullrich (member of Cook Dupage), Rt. 3, Box 459, McHenry, Ill.

## Institute Prices are Going Up

The American Honey Institute has been taking a great loss on literature and postage during the years. Now a new printing of Old Favorite Honey Recipes is about ready.

Because so many do not receive the news bulletin which carried a notice that the price on Old Favorites will go up April 1, we are extending the time until May 1. Order now if you will need copies.

The book may be purchased at \$15.00 per hundred or \$7.50 for fifty books during April. On May 1 the price will be \$20.00 per hundred.

## A Costly Prank

A clipping sent in by Carl Killion, Illinois Chief Inspector, from the Indianapolis Star, tells about six youths of Bluffton, Indiana, in a pre-Halloween prank, scattering 13 colonies of bees belonging to Floyd Price of Markle. Judge Homer J. Byrd gave the boys the choice of losing their driving privileges for three months and making restitution of \$100 each to Price or spending 30 days in the county jail and facing a possible fine. They settled for the \$100.



## CHECK-OFF PLAN PARTICIPATION FOR QUEEN BREEDERS

At the request of The American Bee Breeders Association, the Honey Industry Council approved at Phoenix a system whereby queen breeders and package shippers will be allowed to contribute to the industry's Check-Off Plan. Basis for contributing will be two-thirds of one per cent of the annual gross business volume.

Leslie H. Little, secretary-treasurer of the Council and ABBA representative to the Council, submitted the association's request, that bee breeders be allowed to participate in the plan, at the annual meeting in Phoenix. ABBA members had voted unanimously to request participation at their annual meeting, held in Valdosta, Georgia on November 11, 1959. Contributions from bee breeders could be expected to considerably increase funds received into the Check-Off Plan in the future.

Bee breeders will contribute on both the producer and the packer level, which will mean a four cent contribution for each six dollars of sales volume. A breeder whose volume amounts to \$15,000.00 a year would thus contribute \$100.00 to the fund. Considering the average price of honey, light and dark, for the nation to be ten cents per pound, a sixty pound can would be valued at six dollars. As bee breeders have no unit precisely comparable to the sixty pound can, the unit standardized

by the Council as a basis of contributing, participation on a dollar volume basis was suggested.

Participating bee breeders will be given a rubber stamp upon receipt of their pledge to support the plan. This stamp will be used to mark either invoices to package and queen customers or to stamp packages of bees or queens. Where such a mark appears on the invoice or the cage, customers will know that a part of his purchasing dollar has been pledged to the support of the honey industry.

The ABBA hopes that this breeder participation will serve to stimulate interest in the Check-Off Plan as well as demonstrate to honey producers that bee breeders have an active interest in the welfare of the honey industry. The extent of participation among breeders is yet unknown, but it is certain that some will contribute in 1960 and it is assumed that others will follow as soon as the plan is publicized.

Queen and package shippers who wish information on participation can obtain details on the plan by writing to Leslie H. Little, Secretary-Treasurer, The Honey Industry Council of America, 831 Union Street, Shelbyville, Tennessee, or to Garnett Puett, Secretary, ABBA, Hahira, Georgia.

## DO WE WISH TO SURVIVE?

by C. R. BECK

Simple economics teaches that beekeepers, beekeepers' organizations, packers, and bee supply houses will have to spend more in order to sell more honey. We can only spend more by a greater contributory effort on the part of all concerned.

Advertising does pay; and with the finest food product to be sold, perhaps we should not expect large numbers of people to try honey without first hearing about it. Undoubtedly, there are more housewives in the United States who are not familiar with honey than the number who know its merits. This is true because there are so few beekeepers and too little ad-

vertising of honey for the new housewives of the last twenty years.

What research there is on honey as a food and as a medicine is so fragmentary and incomplete that few believe it and even fewer accept or try it. Let's spend in order to get the proof, and then publicize this proof. For example, the research completed on honey as a formula baby food is so strong that if it could be put into the advertising we need we couldn't begin to produce enough honey in the United States to satisfy the needs of young mothers and children at a fair price to beekeepers.

The Check-Off Plan has merits, but

it is a safe bet that only a small segment of the industry is contributing, and the total of two cents a can is so pecuniary that our industry can never expect to get the marketing job done. We are much like the Biblical parable of not using our talents in that we have the responsibility of letting people know what a good food product we have rather than keeping it a secret.

If we were willing to contribute one cent a pound to the advertising and promotion of honey through modern research methods by responsible beekeepers' organizations, it probably would be a safe bet that the price of honey would double in five years. This, however, is too much to expect, and we will continue to fight the inevitable successes and failures that we are beset with. The present tendency is for beekeepers to expand and increase their colony numbers to make up for poor crops and poor prices, but what most overlook is that the production end of the business operates on the economic principle of increasing costs. By simple economic analysis, this means that the larger one becomes, the greater the cost of production. He may produce more pounds, but the net profit per pound grows smaller and smaller.

One does not wish to be critical and overlook the good intentions of the Bee Industries Association who advertise in our bee journals that they have contributed \$36,000 to the advancement of the industry over a nine-year period. Based on their gross or net income, what a small amount this must be to support the industry when compared with other types of industries, but proportionately, it is, perhaps, more than we have contributed as individual beekeepers.

There must be ways we can get the job done should we really desire to do so. I would first suggest that we pay the price and begin by employing Walt Disney to prepare a film based on the scientific facts we have available on honey and bees. Other industries have been helped to prosperity by such a method, and this would be a beginning.

We are in the revolution as far as commercial beekeeping is concerned, and based on present cost ratios only

the fit will survive. Perhaps this is the straight economics of competition; but to the beekeeper who knows we have the finest food product on the

market, it is our responsibility to produce and sell more honey. Are we only half willing to survive?  
South Dakota

## SOCIAL SECURITY FOR FARMERS

The Social Security Administration has been making disability payments since July 1957. No doubt, some have qualified for these benefits based on outside employment other than farming, or on a combination of farm earnings and other coverage. But for the most part, farmers are just now coming into the social security disability picture.

To receive social security disability payments, a farmer, like the worker in commerce or industry, must meet these requirements: (1) have 20 quarters of coverage (about 5 years) under social security in the 10-year period before he becomes disabled; (2) be so severely disabled that he cannot engage in substantial gainful activity; (3) have been disabled to this extent for at least six full months; and (4) be 50 years of age.

Since most farmers came under social security beginning with 1955, this 20-quarter (5-year) requirement has just been met with the closing of the 1959 taxable year. Those farmers who base their social security coverage on "material participation," or the supervision and instruction of tenants or share-croppers, did not come under the law until 1956 and have another year to go. No disability payments are made to persons with less than 20 quarters of social security coverage.

Now, let's look at the second requirement. There is no provision in the law covering temporary or partial disability. The law defines "disability" as "inability to engage in any substantial gainful activity by reason of a medically determinable impairment that is expected to be of long-continued and indefinite duration or to result in death." Note that the law says *any* gainful activity; the activity is not limited to farming.

However, let's take an example:

Suppose John Brown, age 58, has run his farm as sole owner and operator for the years 1955 through 1959 and paid into social security on his earnings each year. Then, on January 15, 1960, he suffered a stroke, leaving him paralyzed. He files for disability payments. Now, to get into re-

quirement number 3. Since he became disabled on January 15, the month of January will not count in the six months waiting period. He must be disabled for six full months. John's waiting period starts with February 1960; his six months are up with July 1960 and we can start paying him with August 1960, provided his condition has remained the same or worsened. Requirement number 4 is self-explanatory.

A worker must be 50 years of age to receive disability benefits. However, these same requirements apply to a worker under age 50 in establishing a "disability freeze"—that is, he files an application to protect himself during the period of disability so that this unproductive period will not count against him in figuring his and his family's future benefits. If he remains disabled and his record is "frozen," benefits can be paid to him at age 50, based on his average earnings up until the time he became disabled.

Many factors are taken into consideration in determining whether or not a farmer is disabled. These include his education, training, special skills, mobility, the nature of his impairment, his farming "set-up," and others. If you feel you might qualify, or have other questions, see your nearest social security office right away. If you qualify, your benefit checks will range from \$33.00 to \$119.00 per month, depending on your average earnings under social security. If you qualify, your wife with dependent children may also qualify for payments. If there are no entitled children, a wife must be at least 62 to receive payments. These family benefits range from \$53.00 to \$254.00 per month, dependent on the disabled worker's earnings under social security and the number of eligible persons in the family.

Your local social security office will be happy to answer any questions about the disability provisions of the law.

From Social Security Administration, Quincy, Illinois. J. W. Wagye.

## Sprays and Repellents

The New Zealand Journal of Agricultural Research quotes all the effects on honey bees of DDT and Thiodan as applied from the air to the various Brassica, "cabbage."

An additional report is on the effect on honey bees of Rogor and Endothion applied from the air to Brassica, also the trial of M.G.K. repellent 874. Conclusions are that Rogor should not be applied to flowering Brassica crops. Endothion can be safely applied and M.G.K. repellent 874 had no repellency when applied to turnip or cabbage crop under the tested condition.

If DDT sprays are applied before bees visit the flowering Brassica crops, the mortality will be quite slight. On the other hand, Thiodan should not be applied to flowering Brassica crops.

## Laidlaw Now Associate Dean

Harry H. Laidlaw, Jr. who has been in the Department of Entomology at Davis, California and will so continue, has recently been named Associate Dean of the College of Agriculture according to announcement by Dean Fred N. Briggs. Dr. Laidlaw's activities in entomology and in research and teaching of beekeeping will, of course, be restricted but he will still have considerable time to devote to this. Dr. Laidlaw is also Commanding Officer of the 6157th Research and Development Army Unit which is made up largely of scientists on the Davis campus.

## Honey Exports, Nov. 1959

To Canada 187,000 lbs.; to Sweden, 27,000 lbs.; to United Kingdom 165,000 lbs.; to Netherlands 75,000 lbs.; to Belgium 160,000 lbs.; to France 48,000 lbs.; to West Germany 929,000 lbs.; to Switzerland 24,000 lbs.; to all other 51,000 lbs.

## 1959 Honey Crop Down Seven Per Cent

Final figures from U.S.D.A. report a total U. S. Crop of honey of 247,523,000 pounds, down 7 per cent from 1958. This varies little from their earlier estimates. California plummeted, in view of her crop shortage, from first to fifth place with a total of 13½ million pounds. The first ten states in their prospective rank follows: Minn., Wisc., Iowa, Fla., Calif., Ohio, Mich., Ind., and New York. These ten states produced 58 per cent of the total crop. Write to the Crop Reporting Board for full report. Address Washington, D.C.



## *A Grand Old Man in Beekeeping*

### ALBERT GRAVES WOODMAN

A short notice of the death of A. G. Woodman appeared in our March number. Woodman was born in Walker Township near Grand Rapids, Michigan, on December 1, 1874, so he was past 85 when he passed away on Feb. 22. Significant of his remarkable activity to the last, Woodman (spending his winter at Daytona Beach, Florida) had written letters at 5 p.m. and visited with friends at 8 p.m. on the same day as his death.

Albert Woodman was raised on a fruit farm and had his first touch with beekeeping in 1880 when his father, L. C. Woodman, the first of the Woodman beekeeping family, bought 10 colonies of bees. The ten colonies, by the way, had been traded for two full blooded Durhams worth an estimated \$140.

L. C. Woodman had a "green thumb" rather than a knack for selling and it wasn't long till Bert, the son, was not only doing the selling of the fruit and honey but helping as well to work the bees which in those days meant not only the ordinary upkeep of the colonies and extracting but the heavy chore of moving from one crop to another to get the highest yield, because, in those days, one didn't just leave the entrances of the colonies open and move the bees by truck at night; but it consisted in getting the colonies ready one day with carefully adjusted screens and well-closed hives and then spending most if not all of the same night moving the colonies to the chosen location with a hay rack and a team of horses, and possibly it might even be most of the next day on the road; or the carload moving of colonies, still more strenuous.

By 1886 there were twelve acres of fruit and 200 colonies of bees, and by 1890, three outyards. It was not long after that that Woodman preferred one of the outyards because usually a young lady came tripping down the road towards town, while the bees were being worked. And in 1890 there was a wedding.

The Woodman successes, like most of the beekeeping successes of that time, meant a call on them by their neighbor beekeepers, so bee supplies entered into the picture. When that part of the business got so big that the younger Woodman had to haul two or three carloads of woodenware with all the foundation and other supplies to the farm location, he decided that a change was necessary and the Woodman Company moved to the location in Grand Rapids where they have been ever since.

To show you the extent to which beekeeping had advanced in those days Root's agent (Hunt) and Lewis' agent, (Woodman) in one year sold three and one third million comb honey sections at \$3.00 to \$4.00 per thousand. Comb honey moved out in carloads.

But dark clouds appeared. The small hive enthusiasts overdid their activity much to the detriment of the industry, especially since the locations were not so bounteous in nectar, particularly the willow-herb, fireweed and basswood sections.

L. C. Woodman, the father, remained on the farm, his only love. A. G., on the other hand, always mechanically inclined, decided he would enter the manufacture of metal goods for beekeepers; uncapping cans, cappings melters, wax melters extractors and so on. On the death of another pioneer, T. F. Bingham, Woodman picked up the right to the Bingham smoker and improved upon its quality; later he made the Universal extractor, then the radial, and went into everything the beekeeper might need for taking off a honey crop.

The writer well remembers touring Michigan with his wife and four children, accompanied by A. G. and Mrs. Woodman (she preceded her husband in death by several years). They were wonderful guides to the high spots in the state. I have often recalled his remark at that time; that we had better travel all we could with our



children since the family circle would too soon be divided into other similar circles. His daughter Rhoda was already married and away to her new home in Rockford; Virginia was away on social health work and ABC (Baxter) just ready to put his shoulder to the burdens as a relief to his father (1928).

The success of the A. G. Woodman Company has been exceedingly satisfactory. But it has been surpassed by the esteem by which the Woodmans all have been held by the beekeeping fraternity, and that applies not only at home but throughout the country. We all remember the great Michigan meeting at Ionia in 1955, celebrating the 75th anniversary of the A. G. Woodman Company.

Surviving Mr. Woodman are his son Baxter Woodman, carrying on the business, Mrs. Frank P. North (Rhoda) in Rockford and daughter, Virginia, still absorbed in social studies and work, in the East. There are also two grandsons, one granddaughter and six great grandchildren.

The life of Bert Woodman has been a life well lived, and a useful one to the end. Who could wish more than that for him?

M. G. Dadant



# A COMMEMORATIVE POSTAGE STAMP FOR HONEY AND BEEKEEPING

by FRANCIS H. MATTUTAT

A million dollars worth of advertising for our industry—FREE! Such a phenomenon could result from development and distribution of a honey and beekeeping commemorative postage stamp which would be an individual message reaching millions of people in every walk of life, not only here at home, but abroad as well.

Since the early 1930's our government has issued many special stamps honoring historic events, anniversaries, important personalities, industries, mass activities. In the recent past the U.S. has issued about 15 such stamps each year. Print runs on these special issues are about 120 million copies each!

The matter of commemorative stamps has become so important that in 1957 a seven-member Citizens' Stamp Advisory Committee was established, composed of nationally known designers and philatelists, plus a representation of the U.S. Independent Artists. This panel now advises the Post Office on subject and design of postage stamps, selecting the most appealing things. Organizations may submit written ideas for a commemorative or special to the Committee, which is also receptive to possible design suggestions.

It is interesting to note that prior to 1933 new stamps were few and far between and uninspired. Philately's new look has deepened with the years and in fact has spread to other countries of the world. Stamps of the world rated the cover as well as the lead article in LIFE magazine November 30, 1959.

Circulation of new stamps has almost an endless chain reaction, because not only are such stamps eagerly sought after by an estimated 20,000,000 stamp collectors in the U. S., plus perhaps another 70,000,000 in the rest of the world, but are also purchased, used and seen hundreds of times by letter writers, letter readers and handlers. In the field of publicity this is called "repetitive advertising through mass sales media."

The issuance of a new stamp is accompanied by appropriate publicity; the stamp can be first sold at a specially designated post office which would be the center of an industry or activity being honored; it would be written up in newspapers and

magazines; announced over TV and radio for weeks ahead until even the most casual individual is made aware of it.

Our industry has been traditionally handicapped by limited funds with which to exploit all of the wonderful things about honey and bees. As the "Poetry of Agriculture" beekeeping has a unique appeal; the importance of the vital and indispensable pollinating work of the bees cannot be exaggerated. Hence beekeeping should be a worthy subject for a commemorative stamp.

While it is not the easiest thing in the world to have a new stamp issued, an all out effort should be made by our entire industry. The Florida and Arizona State Beekeepers' Associations have already approved such a plan in principle. Every beekeeper should ask his state association to do the same and to

enlist the support of Senators and Congressmen. By the time of our next Federation convention, Feb. 1-3 at Omaha, Nebr. there should be enough such resolutions to motivate our national organizations, the American Beekeeping Federation, Inc., National Honey Packers & Dealers, the American Bee Breeders' Association and The Bee Industries' Association, to initiate a vigorous campaign possibly through our Honey Industry Council to get a honey stamp issued.

Benefits from such an effort can be tremendous to all in the industry and everyone associated with it should get started immediately campaigning for interest and keep working until this honor and recognition is bestowed upon American beekeeping.  
New York

## Honey For Freckles

Half a pound of honey, 2 ounces of glycerine, 2 ounces of alcohol, 6 drams citric acid, and 15 drops ambergris. Apply night and morning. Mrs. A. J. Armstrong, Pocatello, Idaho.

## Plastic and Glass Tubes Provide Means of Transporting Alfalfa-Pollinating Bees

Researchers have found small plastic or glass tubes promising as a commercial means of transporting and establishing alkali bees and other important bee pollinators of alfalfa grown for seed in many parts of the world, the U.S. Department of Agriculture reports.

Adequate populations of pollinating bees are needed to assure seed production in areas where agricultural practices have reduced natural populations by destroying the bee habitats.

Use of tubes for shipping and establishing bees was devised by Dr. George E. Bohart, entomologist of USDA's Agricultural Research Service, with the cooperation of Utah Agricultural Experiment Station scientists at Logan.

In their experiments, the scientists placed one mature alkali bee larva in each sterile 5/16- by 2-inch tube. Larvae were first dipped in a liquid fungicide as a precautionary means of preventing possible spread of bee diseases. Cotton to allow ventilation and absorb excess moisture was used to plug one end of each tube and honeycomb wax was used for the other.

Trials indicated that the lightweight tubes containing larvae can be shipped by any means and placed in soil near desirable nesting sites when the larvae change to the pupal (pre-adult) stage of growth.

Dr. Bohart obtained about 95 per cent emergence by placing bundles of 25 pupae-containing tubes, with the wax-sealed end up, 1 inch below the soil surface a week or so before the adult bees emerged.

Natural or artificial nesting sites should be prepared for newly emerged bees, he said. The best natural nesting sites are in salty, moderately moist, sunlit, fine-silt soil with a firm non-crusty surface. Salt draws moisture to the soil surface and keeps vegetation short and sparse.

Dr. William P. Stephen, of the Oregon Agricultural Experiment Station, found that artificial nesting sites can be made in an excavation 3 feet deep, lined with polyethylene plastic. The plastic is covered with 1 inch of soil for protection, then with a 6-inch layer of gravel to conduct water. The remainder of the excavation is filled with salty, fine-silt soil. Pipes, for adding water, are inserted vertically into the gravel.  
(U.S.D.A.)



# Let's Play Some More

## TOP AWARD IN SYMBOL CONTEST TO ALAN MONROE

In the March Journal we asked everyone to take part in a contest to create a symbol for the Hundredth Anniversary Journal; any symbol—animal, vegetable, mineral. Open to anybody in any beekeeper family, men, women, children.

Contest closed March 10th. If there was room enough on the page we would reproduce the symbols of the first winners in each class. We still will if possible another time. For now, the design that tops all for all classes is by Alan Monroe, North Brookfield, Mass. and of course he comes out first in the men's division. Second, Benson E. Gabbert, Macedon, New York; third, Robert Englert, Rosemount, Minn.

Winners in the women's division: first, Mrs. Benson E. Gabbert, Macedon, New York; second, Mrs. Robert Berthold, Sr., Patterson, New York; third, Mrs. Robert B. Howell, Bowling Green, Kentucky. Winners in class for young adults: First, Mervin C. Eisel, Fort Ripley, Minn.; second, Robert Berthold, Jr., Huntingdon Pa.; third, Gary Lewis, El Reno, Oklahoma. Letters of acknowledgment and awards will be sent as soon as possible.

### Now, How about Another Contest?

The Symbol Contest was so successful, both in the number of contestants, and in the variety and thoughtfulness of the designs that I propose another contest for all you beekeepers and families. We want you to color this symbol from Alan Monroe. You may use paint, crayon, or ink or any method or combination of methods you wish to use.

The rules are simple. First color the symbol. Write your name and address on your entry and state whether adult or child. Mail promptly to me, Mrs. Walter Diehnelt, Jr., Rt. 1, 83, W 13799 Fond du Lac Ave., Menomonee Falls, Wisconsin. I must have your entry for judging by May 2.

**AWARDS**— As before, the First Award will be any two of our very



Winning Symbol Award to Alan Monroe, North Brookfield, Mass.

best bee books, your choice; plus three years of ABJ; plus a Certificate of Merit embodying your symbol suitable for framing and bearing your name. A really pretty and permanent thing.

Other awards, by grade into Second and Third (and Merits), will also receive suitable gifts.

**TRY YOUR TALENTS**— Contest closes May 1.

### Yeast Risen Cranberry Bread

5 cups (approx) sifted all purpose flour  
2 packets granulated yeast  
¼ cup lukewarm water  
1 cup honey  
1 cup milk  
1 teaspoon salt

1 teaspoon grated lemon peel  
½ cup melted butter  
2 cups chopped cranberries  
1 cup chopped walnut meats  
Glaze — 1 Tablespoon lemon juice,  
½ cup confect. sugar.

Soften yeast in lukewarm water with 1 teaspoon honey added. Scald milk and honey, cool to lukewarm, pour into mixing bowl, add yeast and well beaten eggs. Add half of flour, beat well. Stir in butter, cranberries, nuts and lemon peel. Mix in remaining flour to make soft dough. Turn out on kneading board, cover and let rise 10 minutes, then knead 10 minutes. Place in greased bowl, cover and let rise till double. Punch down. Shape into 2 loaves and place in greased pans, cover and let rise till double in bulk, bake 50 minutes at 375° F. Glaze if desired.

Mrs. H. L. Adcock,  
Route 3, Armstrong, B.C., Canada

**Editor**  
**PAT DIEHNELT**

**GAMES**  
**RECIPES**  
**CONTESTS**



# The Federation

Secretary Joseph O. Moffett  
115 So. College Ave., Fort Collins, Colorado



Whoopie and hooray! The group life insurance plan proposed by the Federation was accepted and the minimum needed to put it into effect of 100 members has been reached and is increasing. Everyone should be fully acquainted with it.

The group insurance plan is sponsored by the Ohio National Life Insurance Company. "Best's Life Insurance Reports," recognized authority on insurance companies, says of the Ohio Company "It has for a long time been ably managed with due regard to the interests of the policy holders. The results achieved by the company have been very favorable. It is our opinion that it has substantial overall margins for contingencies. Upon analysis of its present position we recommend this company."

The plan provides life insurance for members of the Federation and their employees payable at death, regardless of cause, at any time while insured. Insurance would be payable to the beneficiary designated and the beneficiary may be changed by completion of request form. Insurance

would be payable in a lump sum or in monthly payments for a period not over 20 years, as long as monthly payments are \$10 or more.

Should total and permanent disability occur before age 60, insurance would remain in force thereafter without payment of premiums during such disability. Also within 31 days after his termination of membership or employment the participant may purchase from the company, regardless of health, an individual and permanent policy for an amount not in excess of the amount carried under the membership plan. No medical examination is required of a member or employee or of anyone who applies for membership.

The Ohio National Life will render individual billings to each member who joins the plan. Members insurance is for \$5,000 for a monthly cost of \$5.50; employees for \$2,000 at \$2.20 a month. Both the amount of the insurance and the premium payment reduce by 50% upon attainment of age 65.



Already well over 100 members have filed application. To be eligible a firm or an individual must have paid 1959 or 1960 Federation dues and dues must be paid each year before December 1st of the calendar year involved.

Complete information and applications as well as membership applications may be obtained from your Secretary at above address.

**FOR SALE**  
**BULK BEES 50c A POUND,**  
**YOU SHAKE THEM**

Also a few queens and packages.

**F. E. MORRISON**

Rt. 2 Box 2242  
Auburn California



"Originators of Frame-Grips"

Send now to McCORD MFG. CO.

Rt. 2, Box 866, San Jose, Calif.

Positive Grip Through the Leverage Action of This Strong Aluminum Frame-Grip.

Plus 32c postage fee.

Deluxe . . . 2.75

Utility . . . 2.45

Also obtainable from your leading Bee Dealer. Don't accept a substitute.

## 3-Band Italian Bees & Queens

|                 |        |        |        |
|-----------------|--------|--------|--------|
|                 | 1-10   | 11-25  | 26 up  |
| 2 lb. pkg. & Q. | \$4.50 | \$4.25 | \$4.00 |
| 3 lb. pkg. & Q. | 5.70   | 5.45   | 5.20   |
| 4 lb. pkg. & Q. | 6.90   | 6.65   | 6.40   |
| 5 lb. pkg. & Q. | 8.10   | 7.85   | 7.60   |
| Queens          | 1.45   | 1.35   | 1.25   |

**PIEDMONT APIARIES**

2624 Ridge Ave. Concord, N. C.

## Honey Labels

Our honey labels will tell your honey story, by word and picture to encourage sales. Our sample catalog is yours for the asking.

Each label in complete color and each one separate (an actual label) to put on your container to see how it looks.

## AMERICAN BEE JOURNAL

Hamilton, Illinois

## PACKAGE BEES & QUEENS NOW READY

Quality — Service — Experience

### PURE ITALIAN BEES & QUEENS

Nothing but the best. Bright 3-band Italians. Prompt service; full weight packages; young laying queens; safe arrival and satisfaction guaranteed. State Health Certificate furnished.

|                  |             |              |
|------------------|-------------|--------------|
| 2-lb. Pkgs. w/q. | 1-24 \$3.75 | 25-up \$3.50 |
| 3-lb. Pkgs. w/q. | 4.75        | 4.50         |
| 4-lb. Pkgs. w/q. | 5.75        | 5.50         |

Nice Large Queens . . . \$1.00 ea.

Packages shipped F.O.B. Express or Parcel Post. Postage Collect.

**JOHN A. NORMAN**

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## L. C. ANTLES

Fruit Tree Pollen Supplies Co.

FRUIT POLLENS and

POLLEN GOLD for human food

**ANTLES & McCORMICK, INC.**  
1908 Fruitvale Blvd. Yakima, Wash.

## Dr. Jarvis New Book

First out in 1958. Now already in its twelfth edition. Shows the interest on the part of readers.

CONTAINS 20 PAGES ON HONEY & CAPPINGS

You should not only have a copy but sell one to your friends or neighbors. Fine Cloth book - 180 pages. Postpaid \$3.00.

**AMERICAN BEE JOURNAL**

Hamilton, Illinois

## FOLK MEDICINE



# Meetings and Events

## Honey for Breakfast Week

Honey for Breakfast Week begins on Easter Sunday and continues throughout the week. The dates are April 17 to April 24, 1960.

The American Honey Institute, 114 North Carroll Street, Madison 3, Wisconsin, has the following to offer:

### LEAFLETS:

Honey for Breakfast \$.125 per 100  
Honey To Start The  
Day Right .....\$.125 per 100  
Honey and Cereals ..\$.125 per 100  
Two Sweet Gifts ....\$.125 per 100  
Honey 'N Pancakes  
So-o-o Good .....\$1.50 per 100

### POSTERS:

Honey on Grapefruit \$1.00 per 12  
Honey 'N Pancakes  
So-o-o Good .....\$1.00 per 16

### STREAMERS:

...Gee, It's Honey  
For Breakfast ....\$1.00 per 100  
It's A Taste Thrill  
On Grapefruit ....\$1.00 per 100  
The Whole Family  
Likes Honey .....\$1.00 per 100

### TABLE TENTS:

Honey For Breakfast ..\$1.00 per 48  
Honey 'N Pancakes  
So-o-o Good .....\$1.00 per 50

You may order as few pieces of literature as you like. Regardless of size your order will be filled.

We hope that everyone will join in helping to promote this week by placing posters in stores, table tents in restaurants, and leaflets in homes. Let's help make Honey for Breakfast a year around habit beginning on Easter Sunday morning.

## Northeastern Kansas Kansas City, April 3

This meeting was also announced in March for Sunday, April 3rd, 2:30 p.m., in Wyandotte County Court House, 7th and Ann Streets. The speaker will be Charles C. Koons, a commercial beekeeper from San Antonio, Texas. He has also worked with the Texas Entomological Commission. Subject: Installation of Package Bees and Artificial Swarming.

## Middlesex County (Mass.) Waltham, April 30th

The annual meeting of the Middlesex County Association, at which new officers will be elected, will be held Saturday, April 30th at the Waltham Field Station at 6:30.

Before the supper a package of bees will be installed in a new Club Hive obtained from Mr. H. Stevens. During the summer months it will be moved to each member's apiary where the meeting will be held.

At the last lecture of the Beginners Course in Beekeeping the subject of "Honey Production and Processing" will be discussed by Al Jones as related to extracted honey; by Asa Olsen regarding comb honey; and by Lou Schmider for cut comb honey.

The Association's exhibit at the Flower Show at Wonderland Park, Revere, during March was larger than usual. The theme was a scene in the yard of a back lot beekeeper. Great interest was shown on the observation hives stocked with live bees and painted queens contributed by past president Baptiste.

M. Southwick, Corres. Sec.  
176 Waban Avenue, Waban 68, Mass.

## Eastern Missouri Botanical Gardens, April 7th

The Eastern Missouri Association will hold its annual meeting and day, April 7th, at 7:30 p.m. at the Missouri Botanical Gardens. The subject for discourse will be "Swarm Control."

Julius E. Simon, Sr.  
Secretary

## Middlesex County (Conn.) Haddam, April 3rd

The Middlesex County Association will hold its annual meeting and election of officers on Sunday, April 3rd, at the Agriculture Center Building, Haddam, Route 9, at 2:30 p.m.

A Dadant Midnite Queen with a 3 lb. package will be installed in a hive and become the club's demonstration colony at every meeting. Spring management and early supering will be discussed. A pot luck supper will close the gathering. Beginners and all beekeepers are always warmly welcomed. Bring supper dish, cup, etc., Coffee served.

Frank C. Boyle,  
Secretary

## Northeast Arkansas Jonesboro, April 16th

The Northeast Arkansas Association will convene at Jonesboro State

College Saturday, April 16th, according to an announcement from President T. A. Caldwell.

Ray L. McLester  
Sec., Arkansas  
State Association

## Midwestern Association Kansas City, April 10th

The Midwestern Association will hold its regular monthly meeting in the I.O.O.F. Hall, 812 Westport Road, Kansas City, Missouri, Sunday, April 10.

The meeting will feature a speaker and discussion on the subject "Handy Hints for the Bee Yard."

Refreshments will be served. Everyone welcome.

James A. Worrel  
Secretary

## Preliminary Announcement of the Penn State Beekeeping Short Course

The annual one week short course on beekeeping will be given at Penn State University, State College, Pa., from August 15 to 19 inclusive. The summer meeting and basket picnic of the State Beekeepers Association will be held the day after the short course or on August 20, also at Penn State. The short course banquet will be Friday August 19 at the Autoport just south of State College on route 322. All are welcome. Reservations must be made for the banquet by August 15.

Edwin J. Anderson  
Penn State

## Hampden County (Mass.) East Longmeadow, April 9th

The Hampden County Association will hold its regular business meeting on April 9th at St. Pauls Vestry, 30 Somers Road in East Longmeadow. We are proud to announce that this meeting will feature an illustrated bee lecture to be presented by Eugene Keyarts of Madison, Conn.

Peter Musinski  
President

## Micha Kellner Seeks Position Here

My son, Micha, 22, has gained recognition in this country (Israel) for beekeeping and queen rearing. He is now studying agronomy at the Hebrew University in Jerusalem but, after finishing the first year, he feels



that he wants less to become a scientist and more a practical bee expert. He hopes to gain admission to some institution where he may earn at least a part of his stay. Anyone interested in this earnest young man should correspond with him or with his father who is a dental surgeon at 3 Balfour St. in Haifa, Israel.

#### Allen C. Trainer

Allen C. Trainer, Allentown, Pa., age 71, passed away Feb. 12th. A beekeeper most of his adult life, he managed the bee pollination service for the Trexler Orchards in Lehigh County. He was a charter member of the Lehigh Valley Association and was active in its affairs since its organization 39 years ago. He was

also an active member of the State Association. He was always willing to give time and effort to anything that would advance the cause of the beekeeper.

Alfred Beswick  
Secretary

#### Kenneth Thayer

On Monday the 29th we were called and notified of the death of one of our most outstanding young beekeepers in Michigan in the person of Mr. Kenneth Thayer of Saginaw, Michigan. Ken along with Mr. Ralph Thurlow was running 2500 colonies of bees in the thumb area of Michigan. He was only 49 years of age and was taken suddenly from our midst on

Sunday morning the 28th with a heart attack. His ready smile and willing spirit will be sadly missed in our Association. He was chairman of the nominating committee at the time of his death. Many of the beekeeping fraternity were present at Freeland, Michigan, for memorial services on Wednesday, March 2.

This little verse is given as a tribute to this friend.

A ray of sunshine, a balmy breeze,  
The nectar of blossoms, the hum of the bees.

These gifts are from our Father above

And he gave friends like you to teach us love.

Margaret F. Seidelman  
Secretary, Mich. Asso.



#### QUEENS

Charley Moosman, Valentine, Nebraska, had a pleasant job of photographing all these good looking girls. Let's see who are they? Kay Siedelman, at left, was the 1959 National Honey Queen; next to her, is Patricia McGinnis, 1960 Florida Honey Queen; then, in center, the 1960 National Honey Queen, Monica McNutt, Tennessee Queen since October; to her right, Rose Marie Haen, Wisconsin Queen; finally, Doris Robertson, Nebraska Queen.

### STARLINE HYBRID QUEENS

Breeding is done only from artificially inseminated queens. Over 400 colonies headed by the proper drone mothers surround our mating area for a distance of eight miles in all directions, insuring the purest possible mating. Only the best queen-rearing conditions will produce quality queens.

| PACKAGES |        |         | DADANT'S STARLINE HYBRID QUEENS |          |
|----------|--------|---------|---------------------------------|----------|
|          | 1 - 24 | 25 - 99 | 100 - up                        | 1 - 24   |
| 2 lb.    | \$4.75 | \$4.50  | \$4.25                          | 25 - 99  |
| 3 lb.    | 5.95   | 5.70    | 5.45                            | 100 - up |
| 4 lb.    | 7.15   | 6.90    | 6.65                            |          |

Add 10c per queen if you wish the queens marked and/or clipped

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Hahira, Georgia

"Where Satisfaction Is a Certainty"  
SHIPPERS SINCE 1919



# PACKAGE BEES QUEENS

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## CAUCASIANS

When you buy bees from Stover, you get the results of our long experience in producing better package bees and queens. Several of our employees have been with us for over thirty years, and many of our customers even longer. This speaks for itself.

May we have your order? No deposit to book but we ask that payment be made 10 days prior to shipping date so we can line your order up properly.

Three branches to serve you better.

### — PRICES TO MAY 20TH. —

| In lots of | Queens | 2 lb. & Q. | 3 lb. & Q. | 4 lb. & Q. | 5 lb. & Q. |
|------------|--------|------------|------------|------------|------------|
| 1 - 24     | \$1.50 | \$4.50     | \$5.65     | \$6.75     | \$7.95     |
| 25 - 99    | 1.40   | 4.25       | 5.35       | 6.45       | 7.55       |
| 100 - 499  | 1.30   | 4.00       | 5.05       | 6.10       | 7.15       |

Tested Queens \$2.50 each

Queens Postpaid - Airmailed - Clipped - No Extra Cost

10c each extra for marking

# THE STOVER APIARIES

Mayhew

Mississippi

## PLANT'S BEES

Year after year dependability, quality service.

|                       | 1 to 9 | 10 to 50 | 51-up  |
|-----------------------|--------|----------|--------|
| 2-lb. pkg. with queen | \$4.50 | \$4.25   | \$4.00 |
| 3-lb. pkg. with queen | 5.70   | 5.45     | 5.20   |
| Queens                | 1.45   | 1.35     | 1.25   |

Larger packages at \$1.20 per each additional pound.

Our Package and Queen Yards are Fumidil fed  
No charge to clip, mark, airmail queens.

**W. E. PLANT**

**Hattiesburg, Miss.**

## Quality in Packages Bees and Queens

Caucasian or Italian; gentle, highly productive.

Health certificate; live arrival guaranteed.

| Lots of | Queens | 2 lb. w/q | 3 lb. w/q | 4 lb. w/q | 5 lb. w/q |
|---------|--------|-----------|-----------|-----------|-----------|
| 1 - 25  | \$1.50 | \$4.25    | \$5.35    | \$6.45    | \$7.55    |
| 26 - 99 | 1.35   | 4.00      | 5.05      | 6.10      | 7.15      |
| 100 up  | 1.20   | 3.75      | 4.75      | 5.75      | 6.75      |

**FARRIS HOMAN**

**Shannon, Miss.**

## "HASTINGS" CAUCASIAN BREEDER QUEENS

Bred exclusively for breeding stock  
for 15 years.

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For a brand new, exciting year.

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|                |        |
|----------------|--------|
| 2 lb. pkg. w/q | \$3.50 |
| 3 lb. pkg. w/q | 4.25   |
| 4 lb. pkg. w/q | 5.10   |
| 5 lb. pkg. w/q | 6.20   |

Extra queens 1-9 \$1.10, 10 up \$1.00  
Health Certificate. Live Delivery Guaranteed. 10% books your order; balance 10 days before shipping date. Shipping season starts April 1st.

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## Herb Light

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Gentle, good honey gatherers

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What beautiful even combs to uncap and labor saved are continued reports of perfectly spaced combs.

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## ARE YOU LOSING BEESWAX?

We render old combs, cappings, and slumgum for beekeepers. Our steam wax presses get every available ounce of wax out of this material. Send for terms.

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## ITALIAN BEES AND QUEENS

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3 lbs. w/q. \$4.10 4 lbs. w/q. \$5.00  
Extra queen \$1.15

Health certificate with each order. Full weight and live delivery guaranteed. 10% down. Phone Marksville 5520.

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THE STAR BEE FARM  
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## Shoot for profit -

## Shoot for the STAR

## Order STARLINE queens this season and profit

| QUEENS   | STARLINE | ITALIAN |
|----------|----------|---------|
| 1 - 24   | \$1.70   | \$1.40  |
| 25 - 99  | 1.60     | 1.30    |
| 100 - up | 1.50     | 1.20    |

## PACKAGE BEES WITH QUEENS

|          | 2 lb.  | 3 lb.  | 4 lb.  |
|----------|--------|--------|--------|
| 1 - 24   | \$4.50 | \$5.70 | \$6.70 |
| 25 - 99  | 4.25   | 5.45   | 6.45   |
| 100 - up | 4.00   | 5.20   | 6.20   |

Packages with Starline queens, add 30c per package.

Clipping 5c each queen, marking 5c each queen.

ALL QUEEN ORDERS SHIPPED POSTAGE PREPAID TO YOU

COLD TEMPERATURE HAS NOT AFFECTED OUR PRODUCT

GARON BEE COMPANY

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## PACKAGE BEES - QUEENS

CAUCASIANS MIDNITE ITALIANS  
We do our best to serve you with the best

| QUEENS   | 2 lbs. w/queen | 3 lbs. w/queen |
|----------|----------------|----------------|
| 1 to 24  | \$1.50 each    | \$3.60         |
| 25 to 99 | 1.40 each      | 5.30           |
| 100 up   | 1.30 each      | 5.10           |

Add 25c per pkg. for Midnite Queens — No Charge for clipping and marking  
Write for prices on truckloads with exchange of cages.

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WALKER-LEE COMPANY

LIVE OAK, CALIFORNIA

## Caucasian \* QUEENS \* "Midnite" Hybrid

Bred from the best stock available. 30 years experience as a CAUCASIAN shipper.

| QUEENS   | 2-lb. w/q | 3-lb. w/q |
|----------|-----------|-----------|
| 1 - 24   | \$1.45    | \$5.60    |
| 25 - 99  | 1.35      | 5.35      |
| 100 - up | 1.25      | 5.10      |

For "Midnite" Queens add 30c to the above prices. Queens clipped and marked 10c extra. Queens air mailed postpaid. Package bees F.O.B. Navasota.

HOWARD WEAVER & SONS

Navasota, Texas

Phone TALbot 5-2836

|             |                |               |
|-------------|----------------|---------------|
| <b>BEES</b> | <b>ITALIAN</b> | <b>QUEENS</b> |
|-------------|----------------|---------------|

Bred to give more honey with fewer stings. For extra safety and vigor our packages and queen yards are fed Fumidil treated syrup. Health certificate with all shipments.

|                       |                |                  |
|-----------------------|----------------|------------------|
|                       | <b>1 to 24</b> | <b>25 and up</b> |
| 2 lb. pkg. with queen | \$4.25         | \$3.75           |
| 3 lb. pkg. with queen | 5.25           | 4.75             |
| 4 lb. pkg. with queen | 6.25           | 5.75             |
| Queens                | 1.10           | 1.10             |

No extra charge to clip or airmail queens. Add 10c to mark. Please give second choice of shipping dates if possible.


**SUNRISE APIARIES**      **Box 573, Petal, Mississippi**

**HOMAN'S**  
**QUALITY BRED**  
**Caucasian or Italian Bees and Queens**

|           |        |           |        |
|-----------|--------|-----------|--------|
| 2 lb. w/q | \$3.75 | 4 lb. w/q | \$5.75 |
| 3 lb. w/q | 4.75   | 5 lb. w/q | 6.75   |


**Queens — \$1.25 each**  
All queens postpaid, airmail. Health certificate; live arrival guaranteed.

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**Package Bees and Queens**



| Packages with Midnite Queens |        |        |        | Packages with Carniolan and Caucasian Queens: |        |        |  |
|------------------------------|--------|--------|--------|---|--------|--------|--|
| Quantity                     | 1-24   | 25-99  | 100-up | 1-24  | 25-99  | 100-up |  |
| 2 Lb.                        | \$4.80 | \$4.55 | \$4.30 | \$4.50  | \$4.25 | \$4.00 |  |
| 3 Lb.                        | 6.00   | 5.75   | 5.50   | 5.70  | 5.45   | 5.20   |  |
| 4 Lb.                        | 7.20   | 6.95   | 6.70   | 6.90  | 6.65   | 6.40   |  |

|         |        |              |        |                         |        |        |        |
|---------|--------|--------------|--------|-------------------------|--------|--------|--------|
| Midnite | \$1.75 | EXTRA QUEENS | \$1.65 | Carniolan and Caucasian | \$1.45 | \$1.35 | \$1.25 |
|---------|--------|--------------|--------|-------------------------|--------|--------|--------|

Clipped and Marked 10c each — Pure, Fresh Royal Jelly

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**The Sixty for 1960**

**Unexcelled Service**  
INQUIRE  
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OR  
**THE CONNEAUT CAN CO.**  
**CONNEAUT OHIO**

**Texas Caucasian Queens and Packages**

|                        |             |              |               |
|------------------------|-------------|--------------|---------------|
|                        | <b>1-24</b> | <b>25-99</b> | <b>100-up</b> |
| 2 Lbs. Pkg. With Queen | \$4.50      | \$4.25       | \$4.00        |
| 3 Lbs. Pkg. With Queen | 5.60        | 5.30         | 5.00          |
| Queens                 | 1.45        | 1.35         | 1.25          |

ALL QUEENS PERSONALLY PRODUCED BY J. E. HASTINGS AND HIS BREEDING STOCK.  
Bred for non-swarming - very gentle - good honey producers.  
Health Certificate Weight and Live Arrival Guaranteed.

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**HARPER'S FAMOUS**  
*High Quality Italian*  
**QUEENS & PACKAGE BEES**  
**For 1960**

|         |               |                  |                  |
|---------|---------------|------------------|------------------|
|         | <b>Queens</b> | <b>2 lb. w/q</b> | <b>3 lb. w/q</b> |
| 1 to 29 | \$1.25        | \$4.00           | \$5.00           |
| 30 & up | 1.15          | 3.75             | 4.75             |

All Queens Postpaid, Airmail. Packages Express Collect or Parcel Post when prepaid by customer. Health certificate and Live Arrival Guaranteed. Please let us have your requirements early.

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Gentle and Industrious Caucasian queens. Hastings strain used for breeders. Bred for greater honey production, Gentleness, Highly prolific, No excessive propolis, Swarm control and Color. 10% books your order - balance due two weeks prior to shipment. Air Mail. Ready to ship about April 10. We do not clip or mark.

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|-----------------------|------------------------|--------------------------|
| <b>1 to 24—\$1.50</b> | <b>25 to 99—\$1.35</b> | <b>100 and up—\$1.25</b> |
|-----------------------|------------------------|--------------------------|

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**SPEARS APIARIES**  
Simmesport, Louisiana  
Italian workers that are quiet, pleasing to the eye, and industrious.  
2 lb. pkgs. w/q.....\$3.50  
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Live delivery guaranteed - Satisfaction assured



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WE HAVE TO OFFER YOU—YOUNG HIGHEST PRIME QUALITY PACKAGE BEES AND QUEENS  
(Liberal overweight)

THE IMPROVED STRAIN of three-banded Italians, backed by over 35 years' careful selecting, breeding, and shipping to all points in U. S. A. and Canada. Each year our breeding and mating stock is carefully picked and tested out for the coming season from hundreds of best by test colonies, which gives you benefit of each season's improvement when buying from us.

We are booking orders for the season of 1960, plan your requirements for this season and place your orders early. We are booking each day from now on to fill your orders promptly on the day you want them with the very best of QUALITY BY TEST. Let us know your 1960 requirements. We guarantee to please you in every respect or money cheerfully refunded. Shipment guaranteed on date you desire. We can take care of your rush orders from March 15th on. No disease. Health certificate with each shipment.

Orders booked 25% down payment to confirm, balance due 10 days before shipment.

|               | Queens | 2-Lb. Pkg.<br>with Queen | 3-Lb. Pkg.<br>with Queen |
|---------------|--------|--------------------------|--------------------------|
| 1 - 24 .....  | \$1.25 | \$4.00                   | \$5.00                   |
| 25 - 99 ..... | 1.15   | 3.75                     | 4.75                     |
| 100 up .....  | 1.00   | 3.50                     | 4.50                     |

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*The Push Button Bee Smoker*

**\$1<sup>29</sup>**

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- no sparks
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*The Time is  
drawing near:*

Have you made your decision regarding  
the number and time you want

## PACKAGE BEES

Place that order now. Usually we can start  
shipping March 20th.

|                          |        |         |            |
|--------------------------|--------|---------|------------|
|                          | 1 - 24 | 25 - 99 | 100 up     |
| 2 lb. bees/regular queen | \$4.50 | \$4.25  | \$4.00 ea. |
| 3 lb. bees/regular queen | 5.70   | 5.45    | 5.20 ea.   |

For Island Hybrid add 30c ea. to above.

Queens clipped unless otherwise ordered

Marking queens 10c each extra

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MAXIMUM DRONE CONTROL — RAPID ACCEPTANCE BY BEES

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**Higginsville, Missouri**

**Italian Package Bees & Queens**

|                            |        |            |
|----------------------------|--------|------------|
|                            | 1 - 24 | 25 or more |
| 2 lb. pkg. bees with queen | \$4.10 | \$3.75     |
| 3 lb. pkg. bees with queen | 5.00   | 4.75       |

Package bees F.O.B. RIO OSO, CALIF.

|                       |        |        |         |
|-----------------------|--------|--------|---------|
|                       | 1 - 5  | 6 - 24 | 25 & up |
| Extra Queens in April | \$1.60 | \$1.35 | \$1.25  |
| May and June Queens   | 1.50   | 1.25   | 1.00    |

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10% books your order

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|------------|--------|-----------|-----------|
| 1 - 24     | \$1.25 | \$4.25    | \$5.25    |
| 24 - 99    | 1.20   | 4.00      | 5.00      |
| 100 and up | 1.15   | 3.75      | 4.75      |

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**POLLENS**—Apple, Cherry, Pear, Plum, Walnut, Almond, etc. for all methods of application.

New Automatic-clock feeding insert which continually releases pollen into the out-going bee channel.



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Antles' Pollens are Certified for Variety and Location of Gathering and Certified for Life and Gram Weight of actual Pollen Grains per ounce.

Ask About **POLLEN GOLD** - the natural, tasty pollen-honey food. Children like it and you will like it.



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Never before have good packages and queens been so important. Serving those who demand the best.

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|                                    | 1 - 9  | 10 - 49 | 50 up  |
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| 2 lb. pkg. with young laying queen | \$4.50 | \$4.25  | \$4.00 |
| 3 lb. pkg. with young laying queen | 5.50   | 5.25    | 5.00   |
| 4 lb. pkg. with young laying queen | 6.50   | 6.25    | 6.00   |
| Extra Queens                       | 1.50   | 1.40    | 1.30   |

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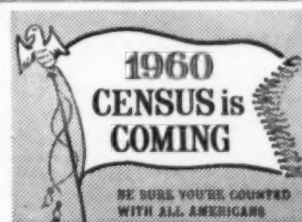
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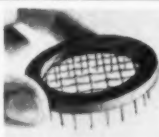
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|   |     |   |     |
|---|-----|---|-----|
| Aeppler Co., C. W. ....                 | 160 | Leahy Mfg. Co. ....                         | 158 |
| Alvies, Dan ..... 127                   |     | Light Herb ..... 155                        |     |
| American Bee Journal ..... 157          |     | Little's Apiaries ..... 155                 |     |
| American Rabbit Journal ..... 129       |     | Lott Bee Co. .... 155                       |     |
| Anderson, O. K. and Son ..... 128       |     | Lotz Co., August ..... 166                  |     |
| Antles, L. C. .... 129                  |     | Lucedale Apiaries ..... 127                 |     |
| Antles & McCormick, Inc. .... 151       |     | Marshfield Mfg. Co. .... 157                |     |
| Arnouville, Johnnie ..... 127           |     | Mayeux, Manuel ..... 128                    |     |
| Arnouville, Oscar ..... 129             |     | McCord Mfg. Co. .... 151                    |     |
| Baker's Apiaries ..... 162              |     | McFarling, Raymond ..... 127                |     |
| Baker, M. E. .... 128                   |     | Miller, John G. .... 128                    |     |
| Banta, A. R. .... 164                   |     | Mitchell's Apiaries ..... 162               |     |
| Bee World ..... 162                     |     | Moore, Sam ..... 166                        |     |
| Bessonnet Bee Co. .... 162              |     | Morrison, F. E. .... 151                    |     |
| Blue Bonnet Apiaries ..... 129          |     | Myers Craft Co. .... 156                    |     |
| Bordelon, E. J. .... 129                |     | Norman Bee Co. .... 127                     |     |
| Bowen Apiaries ..... 166                |     | Norman, John A. .... 151                    |     |
| British Bee Journal ..... 156           |     | O'Ferrel, J. L. and Sons ..... 156          |     |
| Burleson & Son, T. W. .... 128          |     | Pencin, Joe ..... 129                       |     |
| Calvert Apiaries ..... 128              |     | Piedmont Apiaries ..... 151                 |     |
| Canadian Bee Journal ..... 129          |     | Plant, W. E. .... 154                       |     |
| Caribbean Commercial Corp. .... 164     |     | Portland Natural Foods ..... 128            |     |
| Chrysler & Son, W. A. .... 163          |     | Puett Co. .... 153                          |     |
| Clover Bee Farms ..... 129              |     | Reams, W. D. .... 164                       |     |
| Cobana Products ..... 127               |     | Richard, Homer ..... 164                    |     |
| Coffey Apiaries ..... 155               |     | Rives, J. G. .... 128                       |     |
| Conneaut Can Co. .... 156               |     | Root Co., A. I. .... Inside Back Cover, 129 |     |
| Curtis & Sons, Geo. .... 162            |     | Rossman Apiaries ..... 157                  |     |
| Cutts & Sons, J. M. .... 128            |     | Sawyer, M. D. .... 127                      |     |
| Dadant & Sons ..... Back Cover, 155     |     | Scottish Beekeeper ..... 164                |     |
| Daigrepont Apiaries ..... 128           |     | Shackelford, John S. .... 158               |     |
| Dixie Honey Co. .... 163                |     | Sierra Nevada Apiaries ..... 163            |     |
| Ducote, Alvin J. .... 127               |     | Smith, Delmar ..... 129                     |     |
| Dumars, Harlan and Phelan ..... 129     |     | Smith, Geo. E. .... 129                     |     |
| Farmer, H. A., Apiaries ..... 157       |     | Spears Apiaries ..... 156                   |     |
| Forehand & Sons, W. J. .... 162         |     | Star Bee Farm ..... 155                     |     |
| Fruit Tree Pollen Supplies Co. .... 159 |     | Stewart, Frank G. .... 127                  |     |
| Garon Bee Co. .... 155                  |     | Stiles, Gene ..... 129                      |     |
| Gaspard Bee Co. .... 154                |     | Stoller Honey Farms ..... 155               |     |
| Gaspard, Canna ..... 162                |     | Stover Apiaries ..... 154                   |     |
| Gulf Coast Bee Co. .... 163             |     | Strachan, Don J. .... 156                   |     |
| Harper, Carlus T. .... 156              |     | Sunrise Apiaries ..... 156                  |     |
| Hastings, J. E. .... 154                |     | Taylor Apiaries ..... 127                   |     |
| Homan, Farris ..... 154                 |     | Taylor, Stewart ..... 157                   |     |
| Homan, Holder ..... 156                 |     | Walker-Lee Co. .... 155                     |     |
| Honey Sales Co. .... 129                |     | Wally's Bee Enterprise, Inc. .... 166       |     |
| Hignite Bee Farms ..... 129             |     | Wax Workers Inc. .... 164                   |     |
| Humphrey Bee Farm ..... 164             |     | Weaver Apiaries ..... 127                   |     |
| Hutchison Mfg. Co. .... 162             |     | Weaver, Howard & Sons ..... 155             |     |
| Hyland Apiaries ..... 158               |     | Wenner, C. G. .... 127                      |     |
| Jackson Apiaries ..... 163              |     | White Pine Bee Farms ..... 129              |     |
| Jensen's Apiaries ..... 128             |     | Wilbanks Apiaries ..... 159                 |     |
| Johnson Co., Carl E. .... 155           |     | Wilkes Apiaries ..... 128                   |     |
| Kane Apiaries ..... 156                 |     | Williams, Dr. .... 164                      |     |
| Kelly Co., Walter T. .... 159, 163      |     | Williams Bros. Mfg. Co. .... 162            |     |
| Koehnert & Sons, C. F. .... 156         |     | Winslett, D. T. .... 163                    |     |
| Larsen, Carl ..... 128                  |     | Woodman Co., A. G. .... 158                 |     |
|   |     | York Bee Co. .... Inside front Cover        |     |

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# Crop and Market

by M. G. Dadant

## MOISTURE CONDITIONS

From the bounteous snows we have been having, it certainly would appear that moisture will be plentiful in most sections. We must remember, however, that it takes five or six inches of snow to equal an inch of rain. However, in many sections the late fall brought rains previous to the snows and apparently at least in the central sections there is little frost so that the snows should sink in without a maximum amount of carry-off.

We can say in general that moisture conditions are better than average and this applies to practically all the sections except perhaps western Texas, New Mexico and Utah, ranging up into Idaho.

While there have been rains in California, in the desert areas the rains of course, are only on the surface. However, conditions are far better than they were a year ago as far as moisture in California is concerned. The Canadian provinces seem well supplied with moisture with perhaps lesser extent in the western prairie provinces.

All in all we believe moisture conditions are much in advance of what they were a year ago and the possibility for a good growth of honey plants is quite evident.

## CONDITION OF BEES

Here we have fluctuating conditions, depending largely upon the ability of bees to get out for cleansing flights in the northern areas and what interruption there has been in their nectar gathering in the southern areas.

On the whole, perhaps conditions are not much worse than last year except that many colonies went into winter quarters probably with less than the desirable amount of stores and added to this has now come a long period of inactivity of bees on account of heavy snows and cold weather in some places amounting to at least sixty days of confinement. While the confinement in itself is not dangerous, the fact that the beekeeper will not be able to look at his bees and see whether they need stores, does have a contributing influence.

It looks to us like in the extremely northern areas where beekeepers have

been used to preparing well for winter and anticipating long periods without flights, the conditions should not be very much out of normal. Farther south with these poorly prepared and long confinements, the possibility is that the colony strength will not be building up particularly as there is no indication of spring or has not been up until the actual opening of spring itself.

It is in the southern areas perhaps that condition of bees has been at greatest disadvantage. This, of course, caused by the fact that by March first or even earlier southern beekeepers anticipated that the bees would be able to maintain themselves and begin building for the early crops. This year, however, there has been an interruption both by cold weather and particularly by stormy snowy cold weather which has interfered very greatly with honey bee flights and particularly with nectar and pollen gathering. In practically all instances the Southeastern States have reported bees under normal.

## COLONY LOSSES

As this is being written on March 20 it is yet too early to make any anticipation on colony losses but we would infer that colony losses this year are small when the colonies were fortified by, in most instances, good plentiful stores of honey the fall before. In addition there is no doubt going to be some starvation in southern areas where colonies have not been fortified with such stores and where brood production had already begun when the late snows and cold interfered with the normal procedure.

While California, from the very fact that they have had much more moisture than last year, are anticipating, increases, we are wondering whether much of this increase will not be devoted to making up for losses during the fall and winter. Bees, of course, with such a short crop in 1959, did not go into fall and winter quarters in a good condition and there has been considerable starvation and many weak colonies for the spring. Some of this is being made up in late March but it is doubtful whether colonies will be in as good a condition as they were a year ago, although

most certainly honey flora conditions will be far in advance even as to orange bloom and other flora.

## HONEY LEFT ON HAND

The whole country need not worry about the honey left on hand for the 1960 season. By the time the 1960 crop is available, there will be very little honey on hand except in the hands of the packers who, of course, must maintain some stocks to be able to serve their customers during the entire year.

Even so, we understand that stocks are diminishing and even amber stocks in many cases have dropped down to a low point. We hear of one large lot in Texas of some 100,000 pounds of amber honey still available and some few lots of both white and amber in the states of Wisconsin and Michigan where the "trouble zone" has been during the entire winter on account of a larger crop and low quotations by buyers.

In the entire eastern sections and in the Southeast, very little carry-over will be probable. This also may apply to practically all the rest of the country.

It does not, however, apply to the Canadian provinces particularly Ontario and Manitoba where, however, the supplies are in the hands of active and careful cooperatives.

Importation of U.S. honey to Canada has unfortunately been made many times at a price which is not justified by Canadian conditions and the result has been that the competition has been keen for the market much to the loss of the cooperatives.

In fact, one cooperative advised that there was no doubt but what United States honey could move in at 1 to 3 cents per pound more than it was commanding if the seller would only anticipate such conditions.

On the whole, very little amber honey will be available and even less white. The intermountain sections are well cleaned up and California, of course, was light from the start. Washington, perhaps, is one of the few states where much honey is still available and this applies somewhat to Oregon.

*(Please turn the page)*

#### PRICES UP?

There has been a gradual tendency for prices paid to producers to go up somewhat as the packer needed new stocks. However, in the case of the two "orphan" states of Michigan and Wisconsin, this does not seem to have been quite the fact because many offers are still being made at the same old fall prices. Fortunately, the quantities available are not sufficient to be extremely bothersome except to a few individuals.

In all other sections there is a general tendency for price advance tempered somewhat by the fact that the packers seem to have fortified themselves with stocks of honey to carry them pretty well into the spring season.

#### CARRY-OVER

As mentioned above, we do not anticipate the carry-over is going to be anything like bothersome, in fact, much less than a year ago. We look for very little of the honey placed under loans to go into the hands of the government but rather to be redeemed by the borrowers. However, in the case of the two or three Canadian provinces we do see a carry-over

of 25% or more of fine white honey even in view of the fact that the British market is now available. However, even here, competition has to be met.

The fact that Argentina seems to be having adverse conditions this year and may have a short crop, may help stimulate the late spring market to some extent.

#### SUMMARY

All in all we anticipate that the volume of losses of bees this year with anything like a normal spring will be larger than usual and likely the package shippers and bee breeders will be heavily put to meet a season which has already had a shortening from the fact that it has not opened as early as it should to bring their colonies in prime condition for maximum package production.

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There seems to be very little pessimism, however, and we look for the entire losses to be made up if packages are available and perhaps some increase throughout the central areas where crops were good last year and where prices obtained while not entirely satisfactory, were to some extent remunerative.

#### PARDON, AUGUST LOTZ CO.

The name of Lotz was omitted from the list of B.I.A. supporting members in the January issue on page 35. This was a mistake in the markouts removing previous members from the list. A thousand pardons, Mr. Wallace.

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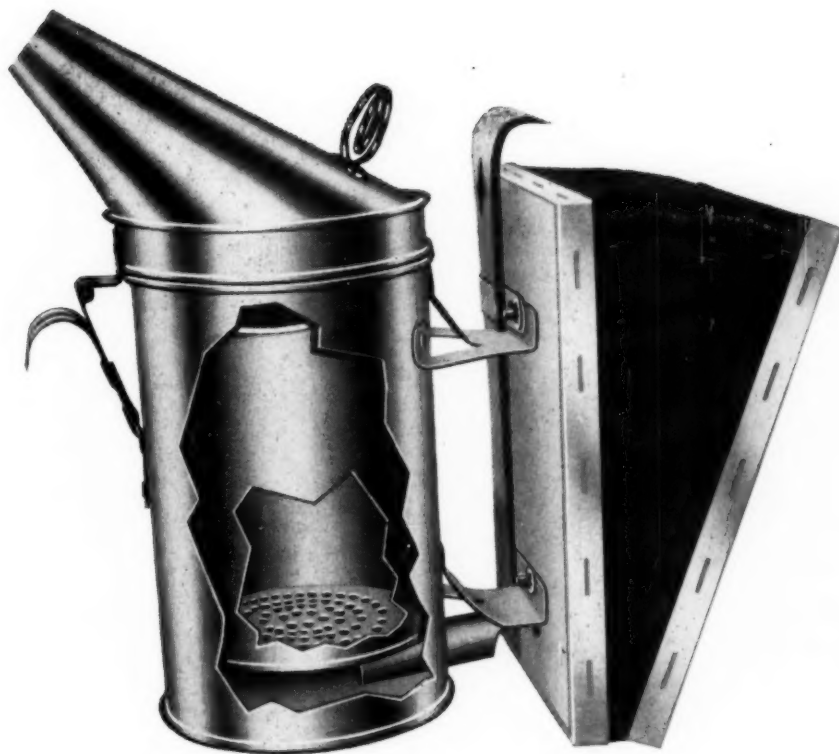
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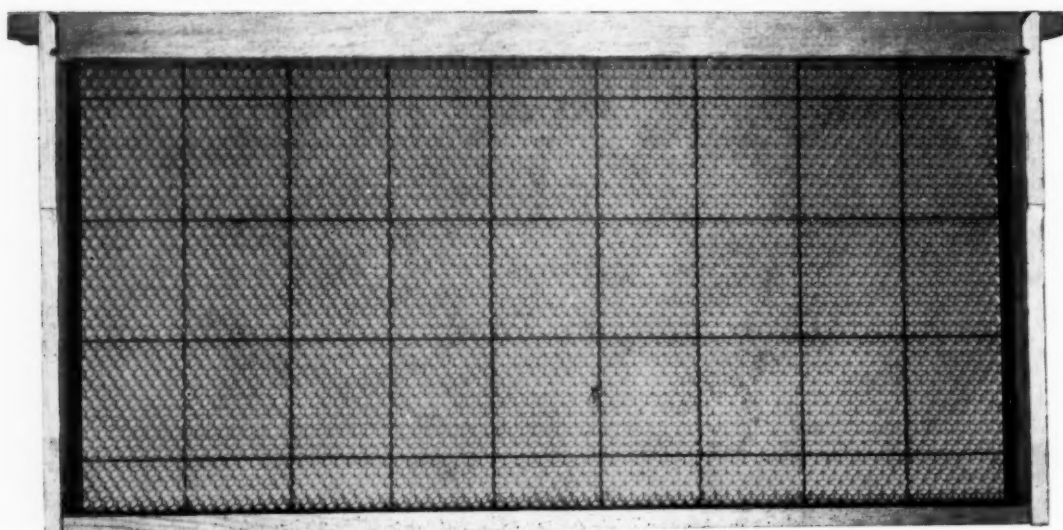
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